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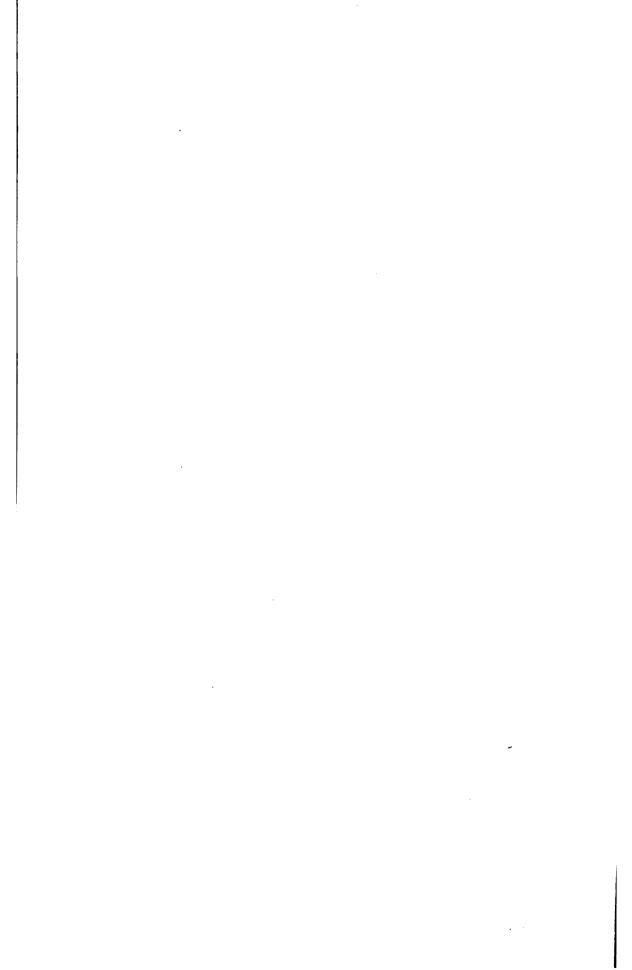
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# FIFTEENTH ANNIVERSARY 1891 1906



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# Hitteenth Anniversary Exercises and Banquet

OCTOBER 16TH 1891-1906

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### **PREFACE**



HEN the Fifteenth Anniversary Exercises of the International Correspondence Schools, described in this book, were first proposed, it was not intended to invite any one to take part in them but officers, employes,

and students. The suggestion was made, however, that this would be an opportunity to explain the methods of correspondence instruction, as conducted by us, to educators, engineers, manufacturers, members of the press, and others who might be interested, and it was decided to invite as many of these classes as could conveniently be entertained.

A large number of those invited could not attend, and, in order that they might have the information about the International Correspondence Schools' methods in textbook preparation, in teaching by mail, and in securing the use of their Courses of instruction by the public, it has been determined to publish the proceedings and send a copy to each of the persons invited who could not be present. That is the reason for this publication.

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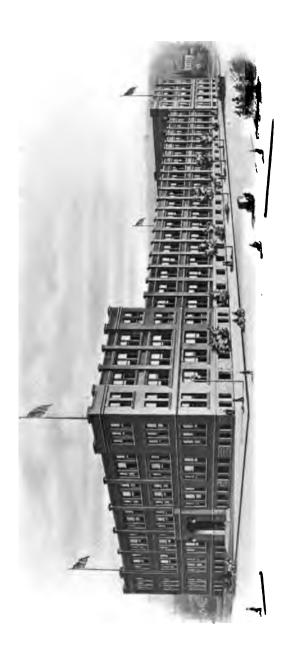
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- H. F. SHERWOOD.—Tribune, New York, N. Y.
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F. H. DOANE, A. M. B.	thout of Litaurng	H. L. TYLER Editor of Ambition
Principal of School of Electr	rical Engineering	J. H. POSTER
E. LAMAZE, B. S., C. A. P.		Manager of Advertising Department
Principal of School of French		F. W. WILSON
W. A. SIEBER, Ph. D.	School of German	Manager of Mail Sales Department C. GAMEWELL
SOLOMON FOSTER		Manager of Printing Department
Principal of School of Law		C. J. HAYES  Manager of Illustrating Department
C. J. ALLEN		DAVID COTTLE
Principal of School of Lettering and Sign Painting		Manager of Collection Department
J. F. COSGROVE		H. S. ROBINSON
Principal of School of Locomotive Running		Manager of Correspondence and Students' Record Department
A. B. CLEMENS, M. E.  Principal of School of Mechanical Engineering		T. H. MAGINNISS
		Manager of Students' Aid Department



SCIENCE INSTRUCTING INDUSTRY

# Anniversary Exercises

OF THE

# INTERNATIONAL CORRESPONDENCE SCHOOLS

HELD IN THE

LYCEUM THEATER SCRANTON, PA.

OCTOBER SIXTEENTH, NINETEEN-SIX 10 A. M.

WILLIAM L. CONNELL, Chairman

# ANNIVERSARY EXERCISES

Occupying the rear of the stage of the Lyceum Theater were the members of the Scranton Oratorio Society, and in front, the following:

#### THOMAS J. FOSTER

President of the International Textbook Company

WILLIAM L. CONNELL

Ex-Mayor of Scranton, Director of the International Textbook Company

HON. SAMUEL W. PENNYPACKER

Governor of Pennsylvania

REV. GEORGE C. PECK, D. D.

Pastor Elm Park Church

HOMER GREENE, LITT. D.

Author, Attorney-at-Law

JACOB K. GRIFFITH, A. C.

Director of the International Textbook Company

RUFUS J. FOSTER

Vice-President of the International Textbook Company

THOMAS E. JONES

Director of the International Textbook Company

STANLEY P. ALLEN

Sccretary of the International Textbook Company

JOHN JESSE CLARK, M. E.

Dean of the Faculty

H. H. STOEK

Editor of Mines and Minerals

JOHN L. MARTIN, C. E.

Director of Instruction

WILLIAM B. RIDENOUR, A. M.

Principal of School of Pedagogy

HON. J. BENJAMIN DIMMICK

Mayor of Scranion

HON, CHARLES EMORY SMITH

Ex-Postmaster General of the United States

ELMER H. LAWALL

Treasurer of the International Textbook Company

CYRUS D. JONES

Director of the International Textbook
Company

FRANK T. PATTERSON

Director of the International Textbook Company

CLARENCE D. SIMPSON

Director of the International Textbook Company

JACOB H. REICHERT

Second Vice-President of the International Textbook Company

WILLIAM P. MAYER

Third Vice-President of the International Textbook Company

EDWIN A. SEITZ

Manager of the Extension Department

SOLOMON FOSTER

Principal of the School of Law

W. N. MITCHELL

General Manager of the Railway Department

# **PROGRAM**

#### WILLIAM L. CONNELL, Chairman

Chorus

(a) "Lift Thine Eyes"
(b) "He Watching Over Israel"
Scranton Oratorio Society

Mendelssohn

Invocation

Rev. George Clarke Peck, D. D.

Address of Welcome

Hon. J. Benjamin Dimmick, Mayor of Scranton

Address, "Education in the Commonwealth of Pennsylvania" Hon. Samuel W. Pennypacker, Governor of Pennsylvania

Chorus, "Bells of Aberdovey"

Arr. by T. J. Davies

The Ladies of the Scranton Oratorio Society

Paper, "The International Correspondence Schools"

Mr. Thomas J. Foster, President, International Textbook Company

Chorus, "And the Glory of the Lord"

Handel

Scranton Oratorio Society

Address, "Educational Influence of the Press"

Hon, Charles Emory Smith, Ex-Postmaster-General, Publisher Philadelphia Press

Paper, "The I. C. S. Textbooks"

Mr. John Jesse Clark, M. E., Dean of the Faculty

Music, "Venice"

Nevin

Bauer's Orchestra

Paper, "The I. C. S. Method of Instruction"

Mr. William B. Ridenour, A. M., Principal, School of Pedagogy

Chorus, "Hallelujah"

Handel

Scranton Oratorio Society

Closing Announcement

William L. Connell



REV. GEORGE CLARKE PECK, D.D.



The exercises were opened at 10 a.m. by Chairman William L. Connell

Prayer was offered by Rev. George Clarke Peck, D. D., Pastor of Elm Park Methodist Episcopal Church, Scranton, Pa.





# OPENING REMARKS

#### HON, WILLIAM L. CONNELL

Ex-Mayor of Scranton, Director of the International Textbook Company

#### LADIES AND GENTLEMEN:

You are assembled this morning to celebrate the Fifteenth Anniversary of the International Correspondence Schools, a celebration that is intended also as a tribute or testimonial to their honored founder, Mr. Thomas J. Foster. (Applause.)

I wish that I might dwell just for a moment on the wonderful progress of this institution during the past fifteen years—might speak of what its nine hundred thousand students have done for themselves as well as for the moral and industrial uplift of our country. I should like to enlarge upon the fact that by its unique but efficient methods this great industrial university has made it easy for parents to realize their hopes concerning the education of their boys and girls. It would be interesting and profitable, if time permitted, to describe how the International Correspondence Schools have brought inspiration and hope to so many and have enabled them to rise from menial and obscure places in life to occupations high in remuneration, usefulness, and honor.

#### Vast Possibilities

Great indeed are the possibilities of this nine hundred thousand—this army greater than that of the Civil War, an army whose vast potencies operate along vocations of peace for a higher intelligence and a brighter future for the country that we all love.

The real purpose of the exercises this morning is to throw light upon the history and methods of this great Institution; to give to those of us who do not thoroughly understand the system of education by correspondence a further light upon the subject. With that thought in mind, we ask you this morning to give us your undivided attention, and through the papers that are to be read, to trace with us the development of the International Correspondence Schools.

I now have the pleasure of introducing to you the Mayor of Scranton, the Honorable J. Benjamin Dimmick, who will deliver an address of welcome.



HON. J. BENJAMIN DIMMICK

# ADDRESS OF WELCOME

# HON. J. BENJAMIN DIMMICK Mayor of Scranton, Pa.

MR. CHAIRMAN, AND LADIES AND GENTLEMEN:

The duties of a mayor are many, his privileges few—an observation which I think will be affirmed by my honorable friend and predecessor, the gentleman who is presiding over this meeting. And chief among those privileges is that of welcoming the guests who come to our doors.

Today, however, I have the double pleasure of not only extending hospitality, but also of paying homage—homage to the great work of the institution whose birthday we are now celebrating.

When, fifteen years ago, the stork left at our door a somewhat delicate infant known as the "Colliery Engineer," even the Scranton Board of Trade, an organization not entirely unused to taking a somewhat rosy view of the potentialities of future undertakings, utterly failed to forecast the wonderful growth of the child in whose honor we are gathered today, and whose voice, even at the early age of fifteen, has penetrated almost every country of the known world.

# Adds Distinction to City

This infant industry—employing a phrase now applied to our colossal undertakings, and therefore perhaps fittingly selectedthis infant industry is an important factor in our community. Viewed from the standpoint of statistics, we see an institution employing over twelve hundred men and women, men and women of a character that adds distinction to our body politic. an institution of which the monthly pay roll is over sixty thousand dollars, and of which the local installation cost over eight hundred thousand dollars. We see an institution of which the output of a single department, the printery, in the past year, was over twentyfive million pieces of separate printed matter. And above all, breaking away from material data, we see an institution—and therein lies our deepest satisfaction—that has given of the springs of knowledge, in the short period of a decade and a half, to nearly one million of students.

There are others here who will speak more in detail of this work. There are others who will speak on the general subject of education. I shall, therefore, confine my remarks—and possibly not without a sense of propriety—to the political necessity of education.

# Popular Intelligence Essential

We have been told by many writers that popular intelligence is essential in any form of democratic government. The term indicated, however, simple familiarity with the "three R's" and with such rudimental knowledge as would safeguard life, liberty, and the pursuit of happiness. But today we must go further. In our highly organized society, the safeguard of our inalienable rights, like the very upholding of the decalogue, demands not simply strength of purpose, but also clearness of vision—clearness of vision in an atmosphere in which the great orb of truth is not always easily discernible. We need a citizenship with trained intelligence, far, far higher than was demanded only twenty-five years ago; a citizenship that can wrestle with such subjects as finance, from its fundamental propositions as to a single or a double standard, up to and through the involved and intricate problems of currency and banking; a citizenship that can pass upon the economic merits of the so-called trusts and the regulation of rates; a citizenship that can pass and pass wisely, upon that difficult, almost unsolvable problem, the problem of the negro; that can act, and act wisely, concerning that great principle of federal supervision—a supervision which, in my judgment, is destined at no distant date to touch almost every walk of life.

In fact, my friends, we need a trained electorate, an electorate that can distinguish between the sound and the sophistical, an electorate that can first mentally decide, and then morally determine.

#### Silent Influence of the I.C.S.

Toward this end, incidentally, if you please, but none the less surely, the International Correspondence Schools are steadily working. Their white missives fall as silently as snow flakes upon every city and upon every hamlet in the land.

My official position in the community would seem to demand, even at the risk of throwing myself open to the charge of resorting to bald and possibly embarrassing compliments, that I should publicly pronounce the name of the one who may justly be regarded

as the founder of this new yet simple method of instruction in the industrial and commercial world; of the one who in the realm of pedagogy, like others in the realm of physics, has annihilated space. That man who, in classical phrase, is the deus ex machina—Thomas J. Foster. (Great applause.)

To you, our guests, we extend an official welcome to the city of Scranton, and that welcome is none the less cordial, none the less representative of the feelings of the community, that it is not engrossed upon parchment or encased in silver. Many of you are distinguished, all of you are worthy citizens of this great republic. And it is a source of supreme satisfaction to us that we are gathered together in the interests of education, the very rock upon which our republic rests.

We wish you, ladies and gentlemen, a pleasurable stay in our city, and when you depart, we trust that you will carry with you the same high regard for us as a community, that we entertain toward you as individuals. (Applause.)





GOVERNOR SAMUEL W. PENNYPACKER

# EDUCATION IN THE COMMONWEALTH OF PENNSYLVANIA

HON. SAMUEL W. PENNYPACKER

Gooernor of Pennsylvania

MR. PRESIDENT, MR. MAYOR, LADIES AND GENTLEMEN:

It is a very great pleasure to me to be permitted to participate upon this interesting occasion, and to be one of this large audience. One of your fellow citizens who is among the ablest of those now doing the great work of the Commonwealth, has often spoken to me about the achievements of this School. He is now lying in his native town upon a bed of pain I am sure you all unite with me in the prayer that the hand of the Lord will rest lightly on him. (The reference is to Hon. Frederick W. Fleitz, Deputy Attorney General of Pennsylvania.)

# Education in Pennsylvania

The cause of education has ever been one of the utmost concern to the people of your Commonwealth. We hear much in the days of the early settlement of Jamestown and the early settlement of Plymouth, of battles with the Indians, though we hear little from either of them about the establishment of schools. In Philadelphia, the next year after the settlement, one of the earliest subjects to attract the attention of the people was the establishment of a school. The first medical school in America was established among yourselves. As you well know, in almost every county in this Commonwealth there is a university or a college. We have the University of Pennsylvania, the Jefferson Medical School, as well as Bryn Mawr, Bucknell, Lehigh, Washington and Jefferson, Franklin and Marshall, and many other colleges. It is almost impossible to name them all. But colleges and universities by no means cover the field of education. The state, as you likewise well know, gives out of its resources six millions of dollars to maintain the public schools

# Power of a Correct Thought

The greatest of forces which have moved mankind, is a great correct thought. Power dissipates, wealth is scattered, all the influences that tie men together are presently broken; but the man who has a correct thought and develops it in action establishes something on the face of the earth that will last forever. (Applause.)

When Moses first talked of the unity of the Godhead, of the Supreme Being, he determined the future of mankind. When a peasant up in the mountains of Switzerland first suggested the separation of Church and State, he then, as it were, created the government under which you are now living. (Applause.) The man who in the cause of education suggested the idea that there are masses of people over the earth who cannot go to colleges and universities, who have not even the time to go to the common schools, but who need the up-lifting of training and education—he did a lasting and a beneficial work. (Applause.)

On looking hurriedly over your program, I see that nine hundred and thirty thousand young men and women have enjoyed the benefits of this School. Think what that means! Look at the significance of that thought. And happily, fortunately, this School was established here in this community. I have just been riding around your hills and have seen your beautiful landscapes, I have seen the evidences of thrift everywhere exemplified about you. In order to meet the needs of the present day, where could a school of this kind be better established than in this growing, strong, and resourceful community? (Applause.)

Happily it so occurred. And now, at the end of fifteen years, you meet to celebrate its establishment, you meet to look back over the success that has been accomplished. It is the hope of your people, it is the hope of the Commonwealth, and it is the general belief that this great Institution will go on into the future with like success and with continued prosperity. (Applause.)



# THE INTERNATIONAL CORRESPONDENCE SCHOOLS

# THOMAS J. FOSTER

President of the International Textbook Company

On the occasion of the first formal celebration of an anniversary of an educational institution conducted on new principles, it is fitting that the plan through which its success has been attained should be officially stated. This task devolves on me by reason of my position at the head of the institution.

The Schools had their beginning in efforts to teach coal miners to qualify for the examinations that candidates for appointment as mine inspectors and mine foremen must pass in this and other To pass these examinations, they must solve the formulas governing the flow of air through mine passages and understand the gases met with in mines, mine surveying, and the machinery used about mines. To do this, they need to know reany of the processes in arithmetic, including involution, evolution ratio, and proportion; the use of the signs and symbols employed in formulas, the application of formulas and their solution, and something of Chemistry, Geometry, Trigonometry, Mechanics, and Hydromechanics. It is no ordinary educational problem to impart this knowledge to men who never attended school, or did so for only a year or two before they were put to work; who are ignorant of the first processes of arithmetic; whose average age is twenty-seven; who work every day in the mines; who have families to support; who cannot quit work to attend a day school; and who will not attend a night school because they cannot be present at every session, and because they are ashamed to expose their ignorance to others who attend; who, when studying at home, use the kitchen table for a desk and often rock the cradle with one hand, to keep the baby quiet, while holding their lesson paper in the other—it is no ordinary educational problem, we say, to impart this knowledge to such men. The present I. C. S. plan of teaching is the perfected system with which men conditioned and situated as described are qualified in all the subjects of a mining education, and made mining engineers, mine inspectors, mine superintendents, and mine foremen.

# Drawing Taught With Success

In perfecting the system to teach mining, we learned that we could teach all the engineering trades and professions. The first contracts provided that the miners should come to Scranton to learn Surveying and Mapping in day classes under the instruction of present teachers. We did not know that we could teach the use of surveying instruments or drawing by mail. But the students could not spare the time nor afford the expense to attend classes at Scranton. We were compelled to experiment, and were successful in making a textbook from which the student could learn, without the assistance of a present teacher, to use a surveying instrument and make a map. A few years later, we were teaching Mechanical and Architectural Drawing to thousands. We have enrolled to date over one hundred thousand students in Drawing Courses, and Drawing is part of the instruction in all the Engineering Courses. We have over eight thousand students in Art Courses, in which are taught, among other subjects, Free-Hand Drawing, Perspective Drawing, Pen-and-Ink Rendering, Water-Color Rendering, Drawing from Nature, Drawing from Casts, and Drawing from the Human Figure.

An idea of the present scope of the instruction work may be obtained from the thirty-one schools into which the teaching organization is divided. Each of these is in charge of a Principal, who may have an Assistant Principal and will have in his separate organization from one-half dozen to over fifty Examiners and Assistant Instructors.

# Specialized Instruction

The titles of the thirty-one schools are: Advertising, Architecture, Arts and Crafts, Chemistry, Civil Engineering, Civil Service, Commerce, Drawing, Electrical Engineering, Electrotherapeutics, English Branches, French, German, Spanish, Law, Lettering and Sign Painting, Locomotive Running, Mathematics and Mechanics, Mechanical Engineering, Coal Mining, Metal Mining, Navigation, Pedagogy, Plumbing, Heating and Ventilation, Sheet-Metal Work, Shop and Foundry Practice, Steam and Marine Engineering, Structural Engineering, Telephone and Telegraph Engineering, Textiles, Window Trimming and Mercantile Decoration.

One of the most important features of I. C. S. instruction is specialization. We teach workers who must take for study, time which would otherwise be given to recreation and rest. They study under so many disadvantages that their instruction must be

restricted to the processes and principles of the particular trade or part of a trade in which they desire to be educated. Therefore, the instruction is grouped into many Courses, to suit the requirements of the students. Thus, there are stationary engineers who wish to qualify to care for and operate a small steam plant; others, who want to qualify to take charge of a plant of two hundred and fifty horsepower; and others who want to qualify to superintend a plant of thousands of horsepower. We have, therefore, three Steam Engineering Courses. In the advanced Courses, the subjects are treated at greater length and instruction in more subjects is included. The School of Electricity teaches thirteen Courses; the School of Mechanics, ten, and so on.

# Unique Plan of the I. C. S.

The plan of the Schools differs from the methods usually employed in teaching, in the following particulars:

First.—The textbooks used are prepared specially for home study.

Second.—The work of the student is corrected, and he is directed and assisted in his studies, through the mails.

Third.—The Courses of Instruction are sold on the monthly instalment plan, through publicity and solicitation, to persons, the majority of whom before they are approached by Representatives of the Institution, have not seriously thought of self-improvement. These miners, mechanics, and others, are induced to undertake Courses of study by inspiring the desire for technical education and creating the self-confidence necessary to begin the work. Students that become discouraged and quit studying are recanvassed and induced to resume their studies by the Representatives as they call on them from month to month for their instalment payments.

(The rules followed in the preparation of the home-study textbooks and the methods of examining and correcting the students' answer papers and of assisting them in their work, will be described in papers to be read at these exercises.)

#### How I. C. S. Courses Are Sold

Five per cent. or more of the Scholarships are sold to men engaged in the engineering trades and professions—some of them graduates of scientific schools, who buy the texts for reference purposes, because they are concise, complete, practical, and better indexed than other technical publications.

Twenty per cent. are sold to persons who desire to qualify for Civil-Service examinations or the examinations in mining, steam engineering, electricity, plumbing, etc., required by many states and municipalities, or who are alive to the advantages of technical training and desire to educate themselves to obtain promotion or advancement.

Thus, about twenty-five per cent. of the business comes through the demand for a practical system of home study in the theory of the trades and engineering professions, but the larger part—seventy-five per cent.—is secured by creating the demand.

You cannot give away education; you can give free instruction. Men will not study unless strongly influenced. Students with whom the desire for improvement is a controlling motive, will take full advantage of opportunities for free instruction, but the proportion of the ambitious to the whole number that should study, is small. Most of those we enroll will not accept a Scholarship as a gift on condition that they are to use it, before their ambition is aroused and their self-confidence stimulated.

Of the great majority who undertake to study, it is true that they need in the start, until the study habit is formed, every aid to perseverance. The more this class pay for tuition, the better, as the fact that they themselves pay the price is an incentive to work.

# Inspirational Publicity and Solicitation

The greater portion of the I. C. S. Courses are sold to careless and indifferent persons, by arousing their ambition, building up their self-confidence, and inducing them to enroll by what I shall call inspirational publicity and inspirational solicitation.

There are but two ways to sell: first, through publicity, which is advertising; and, second, through solicitation, which is salesmanship. We employ both. We publish and talk the benefits of education and the great rewards open to men who can do work better than their fellows; that education is the key to the doorway to success; that we have a practical means for men that work to educate themselves in their work at their work; that a man can form the study habit and educate himself; that we have special textbooks, easy to learn, easy to remember, and easy to apply; that the price is within the reach of all since it can be paid at the rate of five dollars or three dollars per month, and that if, for any reasonable cause, such as sickness, or loss of employment, the student is unable to make his payments promptly, he is given time, and permitted to continue his studies in the interim without additional charge.

We advertise in every publication from which we can obtain prospects, a name for persons sufficiently interested to make inquiry about the Courses of Instruction or methods of teaching, at a cost not too great, and are using a hundred mediums, mainly magazines and trade journals. If we had the capital to carry large advertisements in the daily papers for a year or more, we could probably obtain results through them, and also through bill-board and street-car advertising.

The advertising is made effective by illustrations that catch the attention of the indifferent, untrained mechanic, make him realize his unfortunate position, and suggest to him that he can improve his condition by mastering the theory of his trade.

# The Unambitious Inspired to Study

The enrolment is not made from the educated or cultured classes; the only qualification required to enter for a Course is the ability to read and write English. The plan is intended for persons ignorant of elementary mathematics who cannot attend a regular school to study, and for whom there has heretofore not been provided a practical means for self-education. We find that drawings, such as "Are Your Hands Tied," "On Which Side of the Desk Are You," etc., will halt these people as they drift through life, and give them the first suggestion they have ever had, perhaps, that there is something better to which they can attain.

If our advertisements were simple announcements of technical courses to sell, as are the advertisements of the regular schools, we would not have one inquiry where we now have a dozen. It is said that last year if there had been ten graduates from the Massachusetts Institute of Technology for every one that did graduate, they all could have found employment at good salaries. Why not advertise this important truth so that young men may be induced to take advantage of the opportunities offered by that great institution and others like it?

One of the greatest needs of the time is some agency to make more of the people desire education sufficiently to deny themselves to obtain it. If Mr. Carnegie will supplement his magnificent gifts for libraries by establishing a foundation to provide half a million dollars annually to be expended in advertising the benefits of education and the resources of his libraries, he will be surprised by the great increase in the number using his libraries.

This inspirational advertising in magazine and trade papers, in millions of circulars placed in the homes of the country every month, in exhibits in retail-store windows, and in shops where

mechanics are employed, produces prospects. An inquiry received from the advertising is answered by the Mail Sales Department, and, if the prospect resides in a Route, his name and address is forwarded to the Representative of the Schools who calls upon him, furnishes information required, and solicits him to enroll.

# I. C. S. Field Organization

The Field Organization of the Schools consists of eight hundred Routes, grouped in two hundred and forty Divisions of three or more Routes each, which are arranged in thirty-four Districts of seven or more Divisions each, and covers the United States and Canada. Twelve hundred salesmen represent the Institution in these Routes, Divisions, and Districts.

There is also a Railway Organization, in charge of a General Manager, in which there are employed eighty salesmen. The Schools own and operate seven Air-Brake Instruction Cars, a Dynamometer Car, and a Passenger Railway Service Testing Car. There are instructors lecturing on Combustion of Fuel and Firing, on nine cars that are furnished by Railroad Companies. We are soliciting business on over one hundred railroads in the United States and Canada, to whose employes we sell Locomotive Running Scholarships at reduced prices, in consideration of facilities for doing the work provided by the Company. The first arrangement of this kind was made with the Canadian Pacific Railway eight years ago. That we have been selling on this road ever since, and are doing as large a business now as at any time in the past, is evidence of the excellence of the educational service we give.

#### Salesmen Awaken Ambition

The salesmen arouse the ambition of people ignorant of or indifferent to the advantages of technical education; create in them a desire for self-improvement; convince them that they can educate themselves by home study; and induce them to undertake Courses of instruction, and afterwards encourage them in the cultivation of application, concentration, and the study habit, that they may persevere in their studies.

A salesman can tell more effectively than advertisements the story of the great disadvantages the working man labors under, who is ignorant of arithmetic, drawing, and the theory of his trade, and can speak with more effect of the opportunity offered by the Schools to remove these disadvantages. He makes the prospective student dissatisfied with his present condition, and points out

the road to better fortune. He can give full particulars, answer objections, and remove doubts. He convinces the prospect by his earnestness, and, if necessary, convinces the wife or father, or mother, or all of them. It is often necessary to do this, because an engagement to pay for a Scholarship is an important transaction for many working men, and other members of the family must sometimes be consulted. Most of the students obtained from advertising prospects are enrolled by salesmen. The advertisement secures the interview for the salesman.

# Inspirational Work by Students

The student body created during the past fifteen years is as productive a source of prospects and enrolments as is the advertising. The alumni of a college are a valuable asset; and the army of hundreds of thousands of I. C. S. students is a powerful ally in promoting our interests. The student enrolls, makes sufficient progress in his Course to derive benefit, and tells his friends. An advertisement is not so effective as the testimony of a student who, through home-study training, has advanced in his trade, or in some other occupation, to a position of responsibility. Seeing is believing. Such testimony creates a desire for improvement in thousands who might otherwise remain indifferent. Every month, hundreds of students are promoted. They know the work and its great value and can intelligently and earnestly urge their fellows to do as they have done.

Many students voluntarily assist the salesmen in enrolling their friends, and all who do assist are paid for the service, if they will accept payment. The students are systematically solicited to aid in the work, on altruistic grounds, and without their assistance the large enrolment required to minimize costs could not be obtained. The same equipment in textbook plates, buildings, printing plant, etc., and the same organization at home and in the field would be required if the enrolment were but five thousand per month.

# Benefits Derived by Students

In considering the educational work being done by the Schools, it must be investigated from two points of view: (1) the benefit derived by the individual student; and, (2) the proportion of students benefited.

The booklet which you found in your seats, entitled "Short Extracts from the School Histories of I. C. S. Students," will help in forming an opinion as to the value of the work to the student.

If any gentleman desires to inquire further into this subject, we will furnish him with a list of the students living in his own locality whom he can interview. The limits of this paper will only permit me to say that with I. C. S. texts, and help through the mails as given by the I. C. S. Instructors, any man can learn to draw and obtain a full knowledge of the theory of any of the trades and professions we teach. To that extent and all it stands for, we can help a man starting without any knowledge of mathematics.

As to the proportion the students helped bear to the whole number of students, it is impossible to give exact figures, but an approximately correct estimate can be made.

As previously stated, most of the Scholarships are sold on the instalment plan on small first payments, by inspirational publicity and solicitation, to persons who have never done any studying and who are not accustomed to self-denial. It is much easier to resolve to study than to study, and many are enrolled who do not become students. For the man who agrees to study and pay, and does not, we are not responsible. About two-thirds of those enrolled pay for their Scholarships, occupy the status of a matriculated student in a college or university, and are entitled to I. C. S. instruction. Three out of every four of these are benefited.

# Comprehensive Courses of Study

Considering the amount of work involved in completing the Courses, the circumstances of the students and the fitness of the textbooks for home study without assistance, it is not to be expected that many students will pass the final examinations and receive Diplomas. The Courses are complete; they describe all applications in a trade or profession, and many of them require a great deal of time and study. The Electrical Engineering Course embraces 5,702 pages, and the Architectural Course, 5,296 pages of instruction matter. To answer the examination questions of the Complete Coal Mining Course will require the student to write 117,000 words, make 83 diagrams, and 14 drawing plates; the examination in the Electrical Engineering Course requires 120,000 words, 157 diagrams, and 39 drawing plates, and the Architectural Course requires 96,600 words, 101 diagrams, and 55 drawing The average time taken by students to complete the Coal Mining Course is 4 years and 3 months; to complete the Electrical Engineering Course, 4 years and 2 months, and to complete the Architectural Course, 3 years and 8 months. The longest time taken by a student to finish the Complete Coal Mining Course was 13 years and 2 months, the Electrical Engineering Course, 9 years and 10 months; and the Architectural Course, 9 years and 5 months.

One hundred thousand students have completed their Courses in full, or have completed the preliminary papers of their Courses and a number of the advanced papers, or have received a mark of ninety-eight per cent. on an advanced plate in drawing, which is given to none but persons who have learned to draw. Over thirteen thousand of the latter have received Diplomas or Certificates of Proficiency, the latter being Diplomas for the shorter Courses.

# History of First Five Hundred Students

The first five hundred students were enrolled between October 16, 1891, and May 20, 1892, in the Complete Coal Mining Course, the only Course taught at the time. An examination of the records shows that three hundred and eighty-five, or seventy-seven per cent., completed one or more subjects of the Course, and forty-six completed the Course. The average number of papers passed by students who sent in work, was ten. The majority were content with completing the papers on Arithmetic, Mensuration, and Mine Ventilation, which would qualify them to pass the examinations for mine foremen.

Many of these students have passed away, and of others we have lost all trace. We have compiled a list of one hundred, who, with few exceptions, were miners when they enrolled. Fifty of them are now coal operators, mining engineers, mine inspectors, or mine superintendents, and the rest are mine foremen.

- No. 1. Thomas Coates, who is with us today, a miner when he enrolled, is a mine foreman.
- No. 4. Joseph Knapper, then a miner, now an inspector of mines.
- No. 16. Jesse Ainsworth, then a miner, now a mine super-intendent.
- No. 80. John H. Jones, then a miner, now a coal operator and millionaire.

These first five hundred students did more studying than the average I. C. S. student. They nearly all enrolled without solicitation, to qualify for the examinations, and had a strong incentive to work. Over seventy-seven per cent. completed one or more subjects of the Course, while but one-half of all the students pass one or more of the subjects of their Courses.

## How Much Studying is Done

The fifty per cent. of students who pass in at least one subject of their Course, pass, on an average, three subjects; they complete arithmetic, geometrical drawing, and mechanical drawing; or, arithmetic, geometrical drawing, and architectural drawing; or, blowpiping, assaying, and mineralogy; or, arithmetic, mensuration, and mine ventilation; or, any three of the five hundred subjects taught by the Schools; or they complete a single subject like arithmetic, or a Course of thirty or forty subjects. It takes the average student nearly four months to finish a subject; so that one-half of all the students study on an average one year with the Schools. There can, therefore, be no question that fifty per cent. of the students are benefited.

Ninety per cent. of the students when they enroll cannot work fractions, and, therefore, those who complete only Arithmetic are benefited. As the examples in Arithmetic for each Course apply to the trades of which the Courses treat, a person mastering them learns arithmetic and at the same time many of its applications in his trade.

## Easy to Learn, Remember, and Apply

Having intended only that the I. C. S. Textbooks for home study should be easy to learn, easy to remember, and easy to apply, when a teacher assists by mail, we have found by trial that they are easy to learn, remember, and apply, without a teacher. It is our practice to furnish students, when they enroll, with a complete set of the texts of their Courses, bound in half leather; they are furnished with another set in pamphlet form as they proceed with their studies. Many students complete one or two subjects of their Course, send in no further work, and use their textbooks for home study without the assistance of their Instructors.

Many Courses are bought by engineers, managers of works, superintendents, and others, with the intention of using them for study without the assistance of a teacher or for reference purposes. Others who intend to send their work for correction, find that they can obtain from the Bound Volumes alone the knowledge needed for promotion and advancement; and send in no work.

# The Case of Michael J. McHale

The case of Michael J. McHale, G-728, who is here today as a guest of the Schools, shows what men who have nearly everything

to learn can accomplish with I. C. S. textbooks without the assist-Mr. McHale, while working as a miner, ance of the Instructors. was solicited by a Representative one afternoon just after receiving his pay, to enroll for a Course. He was convinced that it would be to his advantage to study, but as he had received only eleven dollars for the month's pay and had a wife and two children to support, he concluded to take the Representative to his home and have him lay the matter before Mrs. McHale. She also was convinced that her husband should study, and although they could hardly see their way to do it, Mr. McHale enrolled and gave five dollars out of the eleven dollars as the first payment on his Scholarship. He is now a mine foreman. Children were formerly put to work in and around the mines at very early ages, and Mr. McHale started to work when he was only eight and one-half years old. He says he knew nothing of arithmetic when he began. Having promised the Representative that he would study one hour a day, he kept his word, and at the end of a year could extract square and cube root. While studying, he wrote an occasional letter to the Schools asking for explanation of difficulties met in his studies. These were answered, but he received no other assistance, for he sent no answers to the examination questions of his Course.

#### Students Benefit From Textbooks

Recently one of the Principals visited a number of localities and made careful inquiry to ascertain what proportion the students that use their textbooks for studying without sending in work for correction and derive benefit by so doing, bear to the whole number that pay for their Courses. He reported that twenty-five per cent. of the students are using their textbooks without assistance from the Schools, and are deriving such benefit that they are enthusiastic friends of the Institution. It is the opinion of others who have investigated the matter that this is a conservative estimate.

Counting those who use the textbooks for study at home without assistance from the Instructors, seventy-five per cent. of the students are benefited.

The delinquents, the name coined for persons enrolled who will not study and do not pay, are a loss to the Schools. The cost of enrolling and furnishing them with first work is more than the average amount received, and the fact that they undertake the work and fail to persevere, deters others from enrolling.

## Systematic Encouragement of Students

Representatives start persons at their studies who cannot understand the printed instructions how to commence the work, and then help them to master the processes of arithmetic and solve difficult problems. They receive the same commission for reinstating a delinquent that they do for enrolling a new student, and it is a rule that delinquents must be induced to resume their studies and payments if it is possible to get them to do so.

If a person enrolled fails to send in work within sixty days, he is written to by the Instruction Department and advised to begin his studies; if he commences to study and stops, he is urged at intervals to resume the work. Last year one hundred and thirteen thousand eight hundred and thirty-one such letters were written

Our Encouragement Department, at the request of salesmen who furnish particulars of the student's character and habits, writes about fifteen thousand letters per year. These letters, written by men of more than ordinary ability for this work, induce many to return to their studies.

## Magazine of Inspiration for Students

Persons enrolled receive for a year, free of charge, the monthly publication "Ambition." The purpose of this journal is to create a desire to profit from the advantages of study, stimulate to perseverance, and develop self-reliance.

It is made the duty of teachers and Representatives as they correspond with students or come in contact with them, to permit no opportunity to pass unimproved to impress upon them the great good to be gained by completing the Courses of study; to convince them that the habit of study is not more difficult to form than other good habits, and that such habit once acquired, carries with it the power of concentration, the quality most necessary to business success.

A Department composed of teachers who show special fitness for the work, instructs those who find great difficulty in learning, and a particular Instructor is assigned to a very slow student, with instructions to insure his success if it takes all of the teacher's time.

If the student so desires, his employer is informed of the progress he makes in his studies. As the student passes each Instruction Paper, he is notified that if he will send us the address of his employer, of an officer of the company for which he works, or of any other person whom he wishes to be informed that he is studying, the Instructor will write such person and inform him that the student has completed the Paper.

## Students' Aid Department

Our Students' Aid Department writes letters for students out of work, or desirous of changing their work, to the persons to whom they are applying for employment, giving their school history. The Students' Aid also assists students out of work, or seeking a change of work, in finding employment, and furnishes draftsmen, mechanics, and others with special training, to employers in need of them.

On the payment of a transfer fee of one dollar, a delinquent student is transferred to another Course of instruction, if he thinks he can do better than in the Course for which he enrolled.

Delinquency in payment does not suspend a student's privileges. The instruction records are not checked against his account. As in the winter months we correct the work of twenty thousand students a week, this saves expense, and besides, a student who obtains advancement through his studies, even if he does not pay, is worth something to the Schools. We do not, however, give a delinquent who studies through his Course and passes his final examinations, a Diploma, until his account is paid in full.

We are now holding the Diplomas for a number of delinquents. A student in Michigan, enrolled three years ago, completed the Sheet-Metal Pattern Drafting Course last week, although he had made only the initial payment of five dollars on his Scholarship.

The business requires large capital. The textbook plates for the Courses of Instruction cost \$1,500,000. The buildings, printing plant, and furniture represent an expenditure of \$1,000,000, and there is invested in stocks of paper and publications to conduct the business, \$500,000. The Scholarships are sold on the instalment-payment plan and the accounts receivable amount to \$3,500,000. We have \$100,000 invested in cars used in instructing railway employes, and are the largest importers of drawing instruments in the United States.

## A Commercial Enterprise

This is a commercial enterprise. It is necessarily so. The capital could not have been secured unless dividends were earned and paid. That the money to commence the business was obtained was surprising to many, because it was an experiment. The idea

of conducting a large school of any description and making it pay was new. It would have been impossible to secure millions at the start, but the beginning was small; a profit was made each year and the necessary capital taken in as the business grew.

There are four thousand stockholders, among whom are many successful students. They invest in the stock of the Company because they believe that the most permanent and profitable business enterprises are those supplying a general want; that at this time when capital and industry, as well as education and invention have joined hands in improving the conditions of living, there is as great a demand for trained brains as there is for food or clothing; and that a technical school conducted on the lines this is, with so wide a field of operation, should be as profitable as a mine or a mill or a tobacco factory or a brewery.

## Superior Educational Service

But because the business is conducted on a commercial basis, it does not follow that the service performed is inferior to that of other educational institutions, part of whose income is derived from endowments or to such as are maintained by the State or National Governments.

Home study under a teacher who directs and assists the student by correspondence is more difficult than study where the recitations are made to a present teacher. But its greater difficulty is compensated for in its stronger influence in developing the traits of character that make most for business success—self-reliance, concentration, and exactness.

The student who educates himself studying at home after working hours proves his strength and ever after has confidence in himself. Without a teacher, he acquires the habit of concentration; and in writing the answers to the examination questions, he learns to work accurately. This is coming to be known by employers, many of whom, in seeking help, give preference to I. C. S. students. Even the Certificates of Progress attached by the Instructors to corrected recitations, are helpful in obtaining positions and promotions.

#### Suits Convenience of Student

The rules of a home-study school conducted for profit, as this is, are made to suit the convenience of the student and not of the teacher. An I. C. S. mining student may begin his studies in the coal mines of Pennsylvania, continue them while prospecting in

Alaska, and finish them in the gold fields of South Africa. He studies one hour a day or one hour a week, as he feels inclined. Some students take one month to finish the Algebra of the Mechanical Course in which the subject is treated only as far as Quadratic Equations, while others take eighteen months. Students frequently quit studying for years and then take up the work where they left off. In our contract, we provide that we will issue Diplomas only to such students as pass final examinations to our satisfaction, but we agree to teach the student until he is qualified to pass the examination. We have a few students unable to understand the principles taught, who have been through the Courses two or three times, and are still unable to pass the examinations.

To get new business, we must satisfy our customers. The student must have value for the money he pays or he will not recommend the Schools to his fellows. We cannot afford to offend, and the rule is to do more for the student than we contract to do, and to meet his demands on our time and resources, provided that it is possible to do so. We receive hundreds of letters every week from students asking for technical information not covered by their Courses of Instruction, and which we are not under obligations to answer, all of which are carefully answered. I have known a Principal to spend three days answering a question which we were not required to answer. We cannot answer all questions of this character, but we can and do tell the inquirer where, in our textbooks or in others, he can find the knowledge wanted.

It will be apparent that regulations such as these largely increase the labor and expense of teaching, yet as the regulations must in all particulars suit the conditions and convenience of the student and not those of the teacher, they are our practice.

It is more difficult, teaching by mail, to say "No" without giving offense, than for the teacher who has the student before him, yet because we must please, we find a way to meet the demands of the unreasonable and exacting, and hold their good-will. The business is conducted for gain, but with gain as the motive influencing his teacher, the student fares as well as when he is the beneficiary of the State or of the philanthropist.

#### Immense Volume of Business

Some idea of the volume of business done by the Schools and the work involved in disposing of it may be obtained from the following data:

In the school year ending May 31, 1906, there were examined and corrected 743,754 sets of examination questions to Instruction

Papers, drawing plates, and language phonograph records. There were 159,482 letters written in reply to students asking for explanations of difficulties met with in their studies. The postage paid at the Scranton post office was \$105,468. An average of nine thousand persons were enrolled per month, six thousand of whom matriculated. We have seventy-five thousand instalment accounts and collect on fifty thousand every month. The students do not pay regularly, the average being two payments every three months.

The first year, the receipts of the Schools were \$14,991; the second year, \$35,939; the third year, \$73,844. Last year they were \$4,200,000. Last month, they were \$425,000, which is more than in any previous month. We receive \$40,000 per year from New Zealand; \$30,000 per year from South Africa; the Canadian Agencies send us \$180,000 per year. The whole amount received in the fifteen years that the business has been conducted is \$28,775,000. There has been paid \$2,300,000 in dividends to the stockholders.

We have an Instruction Department in San Francisco and are about opening an Instruction Department in Wellington, New Zealand, for students in Australasia. The Instruction Department at Wellington will reduce the time between the students in New Zealand and the Schools, two months.

We are arranging to do special work on the vessels of the United States Navy. Of the seventeen warrant officers promoted to be commissioned officers under the recent Act of Congress, thirteen are I. C. S. students.

We bind our textbooks and Library of Technology in half cloth and leather, and are the largest individual publishers of books in that class of binding in the world.

#### Vast Field of Work

The field for the work is commensurate with the industries of the country. The American artisans working in the trades covered by our Courses, number millions. The total enrolment of the Schools barely exceeds the number of carpenters in the United States. Teaching the theory of their trades and professions to persons already employed is only one branch of the work; other equally important branches are the preparation of dissatisfied persons for more congenial occupations, and giving to young persons about to enter the trades, technical training to enable them to advance more rapidly than they otherwise would.

Every year approximately one million six hundred and fifty thousand young men and women reach the age of twenty-one in the United States. Of these, only a few thousand enter scientific colleges and institutes. Many of these leave before graduation and in time become customers for mail Courses, as do many graduates who buy the Instruction Papers because they are more practical than regular textbooks.

However, the work of the Schools is not confined to the artisan and laboring classes. We have Courses that business men and young men and boys who expect to become business men, should study. They are the Courses in Banking, Commercial Law, Window Dressing, Show-Card Writing, and Advertising. It is as important for a business man to have a knowledge of advertising as it is that he should know commercial arithmetic. We have thousands of female students, many of them taking the Arts and Crafts Courses in which drawing, illustrating, and designing are taught; and many are studying French, German, or Spanish with the phonograph, in the interest of culture alone.

The field cannot contract, but must expand. In the world's requirements for trained heads as well as trained hands, no backward step will ever be taken. Not only will the demand for technical education continue to grow in established industries, but it will be increased by the development of new industries.

#### Moral Influence of the I.C.S.

In concluding this paper, let me say that the I.C. S. is doing more than making skilled brain workers to direct and develop the industries, more than training inventors to seek after the nine hundred ninety-nine parts of truth which Mr. Edison says the race has still to learn. Its Representatives are working in every city, town, and village of the country, inducing men to give up idleness and spend their spare time in study. It takes the careless off the street corners, out of the saloons, pool rooms, and bowling alleys, and, by preventing the waste of money on drink and useless pleasures, puts clothing on the backs and food in the mouths of wives and children.

It inspires to self-denial, works for concentration and accuracy, and develops self-reliance, and thus makes forceful men, who do things. Such men are the reliance of the State; the workers whose intelligence, industry, and courage keep the country in the forefront of progress.

Teaching by correspondence is not new, but the plans that we employ to make it efficient and obtain its use by the people are new. We have opened a new field of educational endeavor in

which the work of the teacher is made more effective by the invention, by the advertising knowledge, and by the executive and organizing power of the business man.

When we succeeded in producing textbooks that removed many of the difficulties and lessened the labor of the home student, there was revealed an educational light which, brightened by advertising and salesmanship, has shone around the world, and benefited hundreds of thousands.

A plan of teaching so far reaching that, operated in an interior city of Pennsylvania, it can educate and make better men and citizens of working people in New Zealand and South Africa, is something worthy the encouragement of all interested in the improvement of the individual and the elevation of the race.





HON. CHARLES EMORY SMITH

# EDUCATIONAL INFLUENCE OF THE PRESS

HON. CHARLES EMORY SMITH
Ex-Postmaster General, Publisher of the Philadelphia Press

Mr. Chairman. Ladies and Gentlemen:

As you have discovered from your program, I am a "butter in." In self-defence, I ought to speak more accurately, and to use the passive instead of the active verb, and say, "I am butted in." (Laughter.)

Fortunately for myself, and still more fortunately for you, I am limited to a few minutes. But I am glad to be here on this occasion. It is worth coming to Scranton to have heard the paper that has just been read. (Applause.)

## World-Wide Temple of Education

I was delighted beyond expression at the manner in which you received Mr. Foster. It was your recognition of, and your affectionate tribute to, one who had a great conception, and who has wrought out that conception with extraordinary ability and organizing power—to an educator who has built up a splendid temple, whose great corridors and whose stately colonnades spread all over our land.

He modestly said that he was not a good speaker or a good reader. Well, if I understand rightly, the foundation of good speaking or good reading, is to have something to say (applause) or something to read; and I am telling you but the truth when I say, that as my memory runs back for long, long years—longer than I would dare mention in the presence of these ladies (laughter)—to the time when I heard Charles Dickens read from the Christmas Carol the story of "Tiny Tim," I did not find it more fascinating than the story which has just been read here. (Applause.)

I found it remarkably instructive and suggestive, and I am sure that I shall carry away from this occasion reflections that will be of advantage in my own vocation, as I am sure every listener may do likewise, whatever his or her vocation may be.

## The Newspaper as an Educator

Your Chairman has suggested that the newspaper is an "educator." It is not for me to dispute his proposition. (Laughter.) The newspaper is an educator, sometimes good, sometimes, unfortunately, bad; and I could not help feeling, as I listened to the story of development of the extraordinary career of this School, that there are some parallels between your School and my ownand some divergencies. My school of journalism goes to the reader or to the student in his home. Your School also goes to the student in the home. My school leaves the reader to digest and master in his home what is presented to him. Your School, in a parallel way, leaves the student to master the lesson sent to him; but it does more than my school, for it invites the student to come back with his questions, and his examination papers; and though, Mr. Chairman, we in my profession sometimes profess to invite replies (laughter), we never fail to remember that we always have the last word. (Laughter.)

My school scatters all over the universe, as wide as the range of human knowledge. Your School shows the power of concentration.

#### I. C. S. Teaches Men to be Practical

Your honored Mayor, in the exceedingly tasteful and felicitous address with which he welcomed us, dwelt upon the value and the importance of educative force in our Republic. Your School not merely teaches particular branches, but by the development of the intellectual power of its students, it has learned how to diffuse broad educational influence, how to enforce discipline, how to take minds with larger powers as yet undisplayed and develop those powers, and lift them up to a higher plane. Charles Lamb, you remember, said that he could write like William Shakespeare, "if he only had a mind to." (Laughter.) But he didn't have a mind to. Well, now, not all of us—very few of us—can be Shakespeares. You remember the man in Boston who was asked about Shakespeare, and he said, "Yes, he wrote almost as well as if he had come from Boston." But there is within the great body of men and women a mental power capable of doing larger and better things than many of them have done, if those minds are trained and equipped. And it is the great merit of this School, that it diffuses mental training and equipment wherever they may be sought. It teaches men to be practical. It teaches men to aim at the object which is within their reach, or at the object that can be reached by a little explanation.

You remember the story of the captain in the Civil War who on his nightly round espied a light appearing over the neighboring hills. He called the corporal of the guard, and supposing it to be the light of the enemy, ordered the corporal to put a hole in it. The corporal sighted his gun, and then looked up and said, "Why Captain, that is the moon." "Never mind," said the captain, "put a hole through it anyway." (Laughter.)

#### Aim at Attainable Mark

Now, that may be a mark, but it is not real; it is not practical. What you do, is to teach men and women not only to aim high, but to aim at the object which is within their reach. In the old mythology, you will remember, the fabled bowman pointed his arrow at the stars; and though it left a gleaming train of light, it fell far short of the mark.

The great object in life is to aim at objects within reach; this great School enlarges and expands the objects within the reach of plain men and women, so that the good it is doing is simply incalculable.

I am amazed at this record which has been read here. Talk about "high finance!" (laughter)—my ten minutes are not quite up yet (cries of "Go on!")—talk about "high finance!" Wall Street isn't in it (laughter), with this record of the work that has been done by this School, and of the tremendous results accomplished here. It is simply astounding. I am only sorry I am not a stockholder. (Laughter.)

#### A Lesson of Concentration

A word now, about my own school, since the Chairman has invited me to follow that line. I say I have learned this morning a lesson here. It is a lesson of concentration instead of scattering; and I fancy I shall go back with something of a new conception. I wish I had that man right at my shoulder every day. In fact, if he ever gets out of a job here, I think I know where he can find a good one. (Laughter.) The man who can organize and develop as he has done, can find a place down in Philadelphia. I myself should be inclined to retire and put him in the editorial chair; for I think he would be like John Lane, editor of the London Times, who I have no doubt could write and write well—but who

never wrote. He had the power, however, of calling the men about him who could write, and of impressing himself upon those men in such a way that he molded the policy of cabinets and shaped the action of parliaments—the greatest editor the world has ever seen.

We range all over creation. We take all fields for our realm. We even go into illustrations. (Laughter.) We print portraits at which one might well say as Hamlet said to the ghost of his father, "Thou comest in such a questionable shape." (Laughter.) I have myself, I must confess, been guilty of assassination; and I must equally confess that, as a righteous retribution, I have myself been assassinated. (Laughter.) It is only fair. Turn about is fair play, you know. I make no complaint, but we must learn, after all, the lesson which this School teaches—the lesson of thoroughness, of minuteness, of excellence; and when we shall have learned that lesson as thoroughly as it is understood in this School, the lesson of iteration and reiteration, the lesson of concentration, then I am sure that we shall expand in our usefulness.

I thank you, Mr. Chairman; I thank all of you for the pleasure and the consideration you have given me, and I go away with more of a feeling of Godspeed for this School. (Applause.)





JOHN JESSE CLARK, M.E.

# I. C. S. TEXTBOOKS

#### JOHN JESSE CLARK, M. E.

Dean of the Faculty of the International Correspondence Schools Read by H. H. Slock, Editor of Mines and Minerals

That I. C. S. textbooks differ in many respects from regular textbooks is proved by their popularity and the enrolment of about nine hundred and thirty thousand students desiring to use them; that this difference is fundamental is demonstrated by the fact that the publishers of regular textbooks have not attempted to imitate our publications. By the expression "regular textbooks," I mean those ordinarily used by schools and colleges. It is the object of this paper to point out the differences between I. C. S. and regular textbooks, to give reasons for these differences. and to explain how I. C. S. textbooks are prepared. The regular textbook is one dealing more or less exhaustively with the subject or subjects of which it treats. Such a textbook covers practically the same ground as any one of half a dozen or more other textbooks treating of the same subject, and differs from it in no essential feature. The aim of the author is to produce a work that may be used by all who wish information that would naturally come under the heading under which the book would be classified, and he is not at liberty to restrict the scope of his book by leaving out sections ordinarily included in works of that character. For example, if the book be on arithmetic and is to include percentage, the author would not dare to leave out a section on interest; if the book be on trigonometry, he would not dare to restrict the solution of triangles to the method of right triangles only and omit all demonstrations; and so on with other textbooks. If he did any of these things, publishers would refuse to print the book, except at his own expense; schools would have nothing to do with it, because it would not meet their requirements. Its sale would be limited. to say the least.

#### Different From Other Textbooks

Yet the International Textbook Company is constantly and deliberately violating all recognized rules of textbook making, and its publications are more eagerly sought than any others. Why?

Because we give the student exactly what he wants and needs in connection with the particular line of study he desires to pursue—and we give him no more and no less. If he wishes to become a fireman of a stationary engine, and hopes that later he may become an engineer and perhaps have charge of a steam plant, we offer him a Course of study exactly suited to his requirements. The textbooks he uses have all been written especially for use in that Course.

We require no preparation on his part beyond the ability to read ordinary English prose and to write it sufficiently well to make himself understood. (There have been many cases where this latter requirement was lacking and the student has dictated his work on the examination questions to his wife or to a friend.) A student taking a Course of this kind desires to know about the construction of steam boilers and steam engines and how they are operated and cared for. He wants to know the principles connected with the firing of a boiler and the relative values of different fuels. He must know how to solve the various problems pertaining to safety valves and how to calculate the strength of boiler shells, stayed surfaces, joints, etc. He also wants a knowledge of the different types of steam engines and steam pumps, how to set the valves, how to take, read, and work up indicator cards, etc. addition, he may need information regarding dynamos and motors, and possibly, also, elevators. Furthermore, he objects to studying any subject or parts of a subject that will delay him in getting this knowledge. All the information he requires is included in the textbooks of our Steam Engineering Course, but he may not wish so much. We provide for this by dividing the main Course into smaller ones, by omitting certain subjects and making others optional. Later, if he wishes to study a more extensive Course, we transfer him to the Course he selects.

You will perceive from the foregoing that all our Courses are special Courses. Our plan is to give every student exactly what he wants, and to prepare our textbooks in such manner that he can obtain the information he desires in the shortest possible time. Each Course thus has its own series of textbooks, written especially for it and adapted to it. This alone, however, would not be sufficient to account for the popularity of I. C. S. Textbooks.

#### Clear and Concise

In addition, we aim to make them so clear that they cannot be misunderstood by any one of average intelligence, and to make all explanations so full as not to force the student to ask any questions or to leave anything for him to infer. In other words, we endeavor to anticipate all his difficulties, and we make use of every device the author, printer, and draftsman can think of in making the text and explanations clear. The author keeps constantly in mind the fact that there will be some student studying his book who cannot get assistance from any one, except by writing to the Schools, and then it may take six months to get an answer, in the case of a foreign student. The regular textbook, on the contrary, is written with the expectation that it is to be studied under the direct supervision of a teacher, to whom the student can refer in all cases of doubt or difficulty; in addition, it usually demands original work on the part of the student.

I can make myself clearer by citing a specific case. I recall that about ten or eleven years ago one of our writers had occasion to describe how drawings and maps are colored, and gave some of the leading color combinations, such as, that yellow and blue make green, etc. I had never done any work of this kind, so I asked him if one color was ground in water, like India ink, and then the other color ground in until the desired secondary color was obtained, or if the colors were ground separately and mixed. I further stated that I couldn't see how the exact shade wanted could be obtained. He said "O! no! that is not the way: you paint one color on, and then you paint the other one over it." I am sure that would never have occurred to me from anything I had ever read. I was quite interested, and asked him if it made any difference which color was applied first. He said "No!" I then told him to put in his manuscript what he had just been telling me, as most of the students who studied his book would be fully as ignorant as I had been.

#### Issued in Two Forms

Before proceeding further, it should be explained that I. C. S. textbooks are issued in two forms. First, as pamphlets, bound in paper covers, and averaging about sixty pages each, which we call *Instruction Papers*; these are sent to the student, one at a time, to study from as he proceeds with his Course. Second, in volumes averaging about five hundred and fifty pages each, and bound in half leather and cloth. The number of Instruction Papers now in use or being prepared is about two thousand.

We have two reasons for issuing the Instruction Papers and for limiting them to such a small number of pages: First, they are light and easily carried, and the student can study them at any time and anywhere; the second, and principal, reason is that the student is far more likely to complete a subject or his Course if the Papers are short. He finishes studying a Paper before his mind has become confused over the multiplicity of new ideas presented to him, and writes his answers to the examination questions. He thus comes into early and frequent contact with the Schools, gets encouragement, and receives help and suggestions that are of great value in connection with his studies. appreciate fully the work we are doing, it is necessary to keep in mind that in addition to teaching a student the subjects included in his Course, we are almost invariably compelled to train him in the study habit. We cannot compel him to study, and can only encourage him to keep on by giving him what he wants and making everything as easy as possible. That short Papers are a source of great encouragement to the student has been demonstrated many times.

A striking example is found in the subject of algebra. Formerly, we included in one Paper, covering about one hundred and forty pages, this subject and the use of the logarithmic table. The students had so much trouble with it that we put logarithms in a separate Paper and divided the remainder into two parts of sixty pages each. A few years later we redivided it so that we had six parts instead of two. A far greater percentage of students complete this work now than when it was comprised in three Papers; and a greater percentage completed it then than when it was comprised in one Paper, yet the text itself is practically unchanged.

The reason that we send the student an extra set of textbooks in volume form is that he may have them to refer to either before or after he has completed his studies. This is a valuable feature, since by reason of the manner in which it is prepared, the I. C. S. textbook is the best obtainable for ready reference on the subjects of which it treats.

## Practical Examples

Our textbooks differ from regular textbooks in still another important respect. The illustrative examples, the examples for practice, and the examination questions relate in so far as is possible to matters with which the student is familiar, or with which he will become familiar when he applies in practice the knowledge he has gained from his studies. Each rule or formula is illustrated as soon as stated by one or more problems, the solutions of which are given, showing its application.

For instance, suppose the Course is Steam Engineering and the student is studying mensuration. In its proper place a segment of a circle is defined and a formula is given for finding the area. Among the examples which illustrate the application of the tormula is one containing a cut showing a return-tubular boiler having a cylindrical shell, and the example relates to the calculation of the steam space above the normal water level; also to the amount and weight of the water and to the heating surface of the tubes. The student thus learns something of direct benefit to him, is kept interested, and is encouraged to keep up his studies. It is obvious that a problem of this kind would be entirely unsuited to a student in the School of Architecture, so we prepare for those students another Paper on mensuration in which the examples, etc., relate to architectural subjects, and similarly for other Courses.

That this feature is very important, is shown in various ways, and particularly with those subjects in connection with which it is hardly possible to give practical examples and problems; as, for instance, algebra, logarithms, formulas, etc. The Paper on formulas covers only eleven pages, and while we have done everything we could to make it easily understood our students have a great deal of trouble with it. The reasons are that it comes between arithmetic and mensuration, the subject is new to the student, and he takes little interest in it, for the lack of concrete examples and problems.

#### Omission of Demonstrations

Perhaps the most noticeable difference between I. C. S. textbooks and regular textbooks is the omission of demonstrations. We give, what is in our opinion, the best formula to employ for any particular case; we tell the student how to use it, and, if necessary, when it should not be used; we give one or more problems of the kind that would naturally occur in practice; in short, we give him more information relating to the use of that formula than he would be likely to find in any of the regular textbooks—but we omit its demonstration, as a general rule. This enables us to cut down the amount of mathematics required to the lowest practicable limit; it enables the student to begin the study of the technical Papers very early in his Course; and it permits the student to finish his Course in the shortest period of time. The omission of demonstrations is the most important feature of the I. C. S. textbook treating on science or technology, and is the predominating reason for its popularity.

It must not be supposed that because our treatment of some subjects is very much attenuated as compared with regular textbooks that this is always the case. Frequently, our treatment is very much fuller, and in some cases the information contained in our textbooks cannot be duplicated. Two examples of the latter are our Papers on Malleable Casting and on Elevators. When the exigencies of the case demand it, even those subjects whose treatment is most curtailed contain a very full treatment in many places. For example, the Arithmetics used in various engineering Courses average about one hundred and twenty pages each, yet the subject of evolution is treated more fully than in any other arithmetic. The Paper on Logarithms gives more information on the use of the logarithmic table than any book I have ever seen, and one of our students who has finished it can easily work problems that would prove very troublesome to many who are familiar with derivation of the logarithmic series, something that but few of our students have ever heard of.

## Replete With Instructive Illustrations

This Paper would be incomplete without some reference to the character and quality of our illustrations. All our illustrations are intended to make the text clear, and the cuts are made by our own draftsmen and illustrators under the direct supervision of the author or editor of the Paper in which they are to be used. Our Illustrating Department comprises at present thirty men, a large proportion of whom were previously employed in the leading engraving houses. The drawings are all made keeping constantly in view the purpose for which the cut is to be used and the subject to be illustrated. Every device known to the draftsman is made use of in this connection, and valuable suggestions are constantly being given by the authors.

As an example of the thoroughness with which the work is done, I would call your attention to our Papers on the subject of air brakes and also to those used in our textile Courses. In the case of the air-brake Papers, we received full-sized castings from the makers, and made the drawings from direct measurements. In the case of the textile Papers, we sent a draftsman to New Bedford, Massachusetts, and kept him there several months making sketches when it was not feasible to photograph the complicated machines it was desired to illustrate. We are willing to go to any length, in so far as expense is concerned, to have our illustrations exactly suited to the text and to render them more easily understood by the student.

## How I. C. S. Textbooks Are Prepared

The manner in which we prepare our textbooks is about as follows: The original manuscript is written by some one employed in our Textbook Department, or, in many cases, by some one not regularly employed by us. In either case, after the manuscript is written it is reviewed and criticized by some one in the Textbook Department, who acts as editor. It not infrequently happens that the editor rewrites a large part of the original manuscript, and, in a few cases, he may rewrite it completely. The manuscript is then read over very carefully by a second editor who has had experience as a compositor and proof reader and who is well versed in English grammar and with the methods employed by the printer. If there are calculations in the Paper, these are checked by still another person who uses a calculating machine for this purpose. The manuscript is then sent to the Illustrating Department and the drawings are made for the cuts.

The procedure employed in connection with the Paper entitled Mechanical Drawing will well illustrate our system. Recently, we desired to revise our Paper on Mechanical Drawing and we contracted with Mr. John Upp, Engineer-in-Charge of the Drafting Department of the General Electric Company, to prepare for us a new Paper on this subject. In addition to the manuscript, he was to furnish drawings to be used in illustrating the Paper and also a set of drawings suitable for use in connection with the preparation of a series of drawing plates. When the manuscript was received from Mr. Upp, it was given to one of the mechanical engineers employed in the Textbook Department who rewrote it from beginning to end. The reason for this was that the manuscript, as we received it, was not suited to our needs; at the same time it contained the information we desired in the preparation of the Paper and we could not have obtained it in any other way. We received from Mr. Upp a manuscript containing the latest and best modern American drafting-room practice, and all we were required to do was to recast it into a form suitable for the use of our students, adding such details as the author had omitted.

# Repeated Careful Editing

When the manuscript had been rewritten, it was gone over by myself, as final editor, and I personally rewrote sections of it, checked the work that had been done, and gave it the finishing touches. It was then sent to the Illustrating Department and the drawings were made in pencil, after which the manuscript and drawings were forwarded to Mr. Upp, who spent several weeks

going over the whole very carefully. He had a large number of valuable suggestions to offer, and I went to Schenectady, personally, to see him, and discussed these suggestions with him. The changes that were mutually agreed upon were made on my return, the drawings were inked in and the cuts made. The manuscript was then sent to the printer.

Before going to the composing room, it was carefully read by proof readers who checked it for errors in grammar, etc., and who indicated on the manuscript the kind of type, sizes of headings, etc. to be used, for the guidance of the compositor. The proof was read several times by myself and also by the person who rewrote the original manuscript, and, in addition, it was read several times in the proof-reading department. Although the Paper is a comparatively long one, covering more than 160 pages, and although it offered almost innumerable chances for making errors, the work was so carefully done that but one or two errors have been detected in the 21 drawing plates, and not more than three or four in the text matter.

## Frequent Revision

Another extremely important feature in connection with I. C. S. textbooks is that bearing on their revision; the correction of errors—both of the author and the printer—and alterations in the text made necessary by reason of ambiguous statements or insufficient explanations. We have a large file which contains everything in the line of printed matter used by our students, each page being pasted separately on a sheet nine inches by twelve inches in size. If any error is detected or is reported by a student, it is noted at once on the proper page in the file. If a student has difficulty in understanding any particular explanation or statement and the difficulty appears to be due to the manner in which the text was written, it is reported to the person responsible for the writing or revision of the Paper. He then makes a note of the matter on the proper page—or on a separate sheet, which is filed adjacent to the page referred to. If an examination question gives trouble to any considerable number of students, note is made of this fact also, and the text is carefully examined with a view to altering it in the future, if deemed advisable. All suggestions relating to improvements or additions to the Instruction Papers received from any source, whether obtained through the reading of publications of the technical press or otherwise, are filed. short, everything that may be of assistance to the person having the future revision in charge is entered in this file.

## Why Frequent Revisions Are Necessary

Regarding the revisions themselves, they are rendered necessary through various causes. Notwithstanding the great pains we take and our long experience, it is practically impossible to prepare a set of textbooks that will give general satisfaction in the first instance. We cannot foresee the difficulties that students will encounter and we are likely to omit certain principles, processes, etc., that a large number of students demand.

As a notable instance of this I cite the textbooks on Shop Practice. These were published in the summer of 1901, there being four volumes. In less than a year, they received a hasty revision, and in two years from the time they were first issued over one-half the original text had been rewritten and a large amount of new matter added, the number of volumes being increased from four to five

Again, certain volumes describe appliances and methods that are constantly changing. This is notably the case in connection with textbooks treating on electrical engineering, telephony, air brakes, and locomotives. We are providing for this temporarily by issuing bulletins; but after a few years, these become insufficient and it is then necessary to rewrite practically the entire text.

We have just completed the rewriting of all the textbooks used in our older Courses and some of those used in comparatively new Courses, which are now rapidly being printed. I may say that the revised textbooks cost, on an average, twice as much as the original textbooks; the reason for this is that the textbooks are entirely rewritten, they cover very much more ground, the illustrations are more numerous and more work is expended on them, the cost of obtaining the information is higher, and the cost of writing and editing is also higher.

This, in brief, is an explanation of some of the more marked differences between I. C. S. textbooks and regular textbooks. I am not able to dwell longer on the subject, for want of time. I hope that what I have said will assist you in grasping the details of our system as you go through the buildings this afternoon.



WILLIAM B. RIDENOUR, A.M.

## THE I.C.S. METHOD OF TEACHING

#### WILLIAM B. RIDENOUR, A. M.

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Nearly one-half a century ago the Merrimac steamed slowly down from Norfolk and attacked the federal fleet in Hampton Roads. In this fleet were the frigates Congress, Cumberland, and Minnesota, which could easily have destroyed the magnificent armada with which Nelson at Trafalgar defeated the combined navies of France and Spain; yet against the monster that came upon them so unexpectedly they were helpless. On the following morning, the Merrimac returned to complete the ruin she had begun. Confronted by the Monitor, prototype of the steel-clad leviathans of today, her mission was speedily ended.

This first battle of the ironclads carried consternation to all the great powers, and especially to England whose unrivaled fleets for more than two centuries had been queening it on all of the seas of the world. Her navy was now shown to be obsolete and useless, as well as her literature on the science of marine engineering.

Such readjustments to new conditions are of constant occurrence, and serve to mark our progress toward the time when man shall be in complete control of the forces of nature. All high achievement is quickly superseded by higher achievement, for man's search for something better—for superlatives—is unceasing. He is never satisfied with what he has attained. From every height he wins, he looks and yearns toward other heights.

## Readjustments In Education

With this progress come new subdivisions in engineering, in industry, in education. Only a little while ago, our colleges had no technical courses worthy of the name. The professions then were law, medicine, and theology. Civil engineering was in its infancy. Its subdivisions into many related branches—hydraulic, municipal, railway, bridge, tunnel—had scarcely been thought of as something to come. When the Roeblings proposed to span the interspace between New York and Brooklyn with the world's first suspension bridge, there were no scientific treatises

describing the methods to be followed. The world had virtually nothing on applied electricity when Edison began his revolutionary work. Since that time, electricity has been revealing a knowledge of her laws to the prying of mathematics, and electrical engineering has now many subdivisions. The burrowings under the Hudson have shown that our schools of technology must add to their curricula a course on modern submarine engineering.

Our colleges used to attempt nothing more than to furnish the sons of the wealthy with training in the so-called humanities, in order to fit them for one or other of the only three professions that a gentleman might enter. Neither the public schools nor the colleges made provision for the training of the artisan. For him, there was only the apprentice system. Even today, the same is largely true, although it is almost axiomatic that the brain of the engineer avails but little unless supplemented by scientific skill in the men that execute his plans. Technical fitness in the man at the top is indispensable; but if our industrial system is to be of the first rank, it will not do to ignore the needs of the man below.

## Germany's Technological Education

Germany has fully realized this important fact. The little Kingdom of Saxony, with an area of only one-eighth the area of Pennsylvania and a population less than that of Illinois, has nearly two thousand men in the great technological school at Dresden preparing to captain her industries. She has, besides, two hundred and eighty-seven industrial schools, all aided and in a measure controlled by the government, where both practice and theory in any one of forty-four technical industries may be obtained by the poorest boy. If supremacy in the commerce of the world is a prize awaiting the nation that has the best system of technical education, the example of Germany furnishes a lesson for the rest of the world. Hemmed in as she is, her marvelous progress proves that she understands how industrial primacy is to be won. Her educators, lawmakers, and industrial leaders are all cooperating with her far-seeing energetic emperor for the glory and prosperity of the fatherland.

In a recent article, the London Daily Mail says: "There can be but little doubt that the marvelous expansion of German trade—one of the notable achievements of the nineteenth century—is traceable to the system of education that has directed all the available resources of scientific knowledge and research toward the solution of industrial problems and the betterment of industrial methods. Her universities no longer form the crown of her

educational edifice. In her polytechnic schools, the keen business man with sound scientific knowledge is today receiving his training for leadership. Her chemists, and her civil, mechanical, and mining engineers are preparing there for the problems of business life by acquiring a thorough practical and technical knowledge. To make the training of these men effective for developing the resources of the empire, hundreds of industrial schools are turning out tens of thousands of skilled helpers for these men of higher equipment."

In this age of machinery and invention, what part is our own country playing in this readjustment of educational ideals? It has forty-three schools of technology, only a few of which are of high rank. Many of our colleges and universities have technical courses but in most of them these courses are treated as of secondary importance. They have only 21,000 technical students. Of industrial schools for training the artisan, there are few. For each 100,000 of population, our country has 173 physicians, 142 lawyers, 104 saloon keepers, and only 10 electrical, 8 mechanical, and 4 mining engineers.

## Need for Correspondence Industrial University

In view of these conditions, is it any wonder that the International Correspondence Schools, in their brief existence, have enrolled more than eight times as many students as are in all our colleges, universities, and schools of technology? Only forty-five per cent. of the colleges have an attendance in excess of our daily enrolment—360 students. Harvard University, founded 270 years ago, has sent out 28,000 graduates. In fifteen years, 85,000 students of our institution have actually finished their Courses and received their Diplomas, or they have virtually done so; and 225,000 other students have completed the mathematics, physics, and drawing that form the broad and safe foundation on which every one of our technical Courses rests.

That this great industrial university is needed has been demonstrated by its marvelous prosperity, by the indorsements it has won from the heads of great industries, from the chiefs of government departments, from prominent educators, from presidents and professors in scores of our best colleges, and from thousands of thinkers on economics. For fifteen years, the Schools have been in the white light under the sharp scrutiny of watchful eyes—eyes quick to distinguish that which is from that which only seems. From students, too, have come letters, almost beyond counting,

filled with the story of what we have done for them, with admissions of indebtedness that cannot be discharged, with assurances of enduring gratitude and friendship. And during all these years, there has been no waning of prosperity; what was at first only an experiment has become an institution—something that rests upon the solid rock of public confidence.

To insure the prosperity of any great enterprise, appropriate means must be used. You have already learned that the success of the Schools is owing in large measure to our textbooks. These books are unique in many respects—in their simplicity and comprehensiveness, in their diction, in their illustrations, in the ease with which they can be learned, and in the fact that they contain just the theory needed in practice and no more. Perhaps, their most remarkable feature is their perfect adaptation to the I. C. S. method of teaching, to explain which is the principal purpose of this paper.

#### Men Trained for Work at Work

This method of teaching was devised for following the student from the schoolroom into the workshop, and training him for his work at his work. By a slow process of evolution, its faults have been corrected and its details adapted to the needs of the student. until it has reached a degree of effectiveness little inferior to the methods of the classroom. Beginning with a single Course intended to teach the theory and practice of coal mining, the work has grown until it includes more than two hundred Courses in engineering and the mechanical and manual industries. Until this method had been wrought into practical perfection, educators were agreed that the functions of the teacher must cease for the student when he leaves school and enters the workshop. This institution has demonstrated the feasibility of industrial training for industrial workers —of education in the scientific theory and practice of their chosen pursuits; it has shown the possibility of giving them, while pursuing their studies, supervision and assistance such that their teacher shall seem almost as real, as helpful, and as accessible as if teacher and pupil were actually together in the schoolroom.

The word teaching implies several distinct things:

- 1. Some one to be instructed or taught—a student or learner.
- 2. Some matter or subject to be imparted.
- 3. A teacher to plan or supervise the instruction.
- 4. A rational plan of procedure called a Method of Teaching. These will now be considered.

#### Millions in Need of Instruction

1. The Student.—The urgent need that countless multitudes have for education is no longer denied. Statistics show that with a population of more than 81,000,000, our country has only 118,000 students in its colleges, universities, and schools of technology, and 822,000 in its high and preparatory schools. A great army of children, numbering nearly 17,000,000, is enrolled in the elementary schools. Of the elementary students, about 850,000 reach the grade next below the high school. In other words, only about 1 per cent. of our population advance far enough to have, at the end of their school life, a fair mastery of fractions.

There is, therefore, no lack of those that need education. They are around us by millions—in the mill, the workshop, the office—and everywhere handicapped and poorly paid by reason of deficient education. They are painfully conscious of this deficiency, and yet are without the ability, unaided, to find a remedy. The needs of these persons demand that technical education shall be obtainable outside the classroom. To meet this demand, the founder of the Schools devised and elaborated a method of teaching the science needed in engineering and the industries. To give these myriads the education they require, to make it easy of attainment, to fit them for the requirements of life, has been the hitherto unsolved problem for the educator.

#### Education for Practical Usefulness

2. The Subjects to be Taught.—A condition indispensable to success in training men for the crafts is the proper selection and arrangement of the matter to be taught. The curricula of the colleges and ordinary schools were intended for another purpose; their principal work has been to develop the mental faculties in general—to strengthen the judgment, cultivate the reason, refine the taste, sharpen the powers of observation, enrich and discipline the memory, quicken the powers of analysis, and give increased keenness to the faculties that discriminate. Their work is largely one of mental gymnastics. When this training is supplemented and rounded out by a thorough technical training in some practical pursuit, the result is an ideal education.

Few persons, however, can get both of these phases of education—the liberal and the lucrative, the theoretical and the practical, the disciplinary and the technical. He that must begin early to earn his living needs an education for practical usefulness, not for liberal culture. The former he can get quickly; the latter requires

years of costly training. His studies must be radically different from those pursued in the schools and colleges. He must omit abstract theory and must deal as far as possible with the practical. His studies must relate to one trade or occupation, and must present its working essentials in the simplest manner possible; they must equip him with aptitudes that command good pay, and for which there is a wide demand. To meet these indispensable conditions, each I. C. S. Course is a simple, complete, and practical exposition of some industrial specialty.

#### Functions of the Teacher

- 3. The Teacher.—There are many methods of procedure in imparting instruction, but the best is undoubtedly that in which there is an actual personal teacher. Indeed, the teacher is a factor that can never be wholly eliminated. His functions are many and varied, the most important of them being the following:
- (a) To advise concerning the kind and quality of training required for a given purpose.

In education for discipline alone, the teacher or educator is perhaps the best judge of the needs of the student. But if the training is to fit the student for some technical occupation, the advice of experts both in the theory and the practice of that occupation will be indispensable. Neither a mere theorist nor a practical expert should be permitted alone to say what should be contained in a course intended to prepare the student for technical or engineering work. Advice of both kinds is requisite—conjoint advice by the men that know the scientific why and the men that know the practical how. The policy of the Schools is to have at the head of its teaching staff men strong both in theory and in practice.

# Student Prepared Step by Step

(b) To apportion to the student his lessons.

Our method of teaching involves the subdivision of the student's work into many short, easily mastered lessons. They are sent to him in a fixed order. Should he be required to master a volume of several hundred pages for each of the many subjects included in his Course, discouraged by the magnitude of his task he would give up at once. His work for six months or one year includes an intimidating array of formulas, technical difficulties and mysteries of many kinds, and they would inevitably turn him from his purpose. But the difficulties that so disconcert the untrained student are only imaginary; if taken in proper order and mastered one by

one they are simple and easy. Hence, two of our principles of teaching are,

Never confront a student with an unnecessary difficulty.

Prepare him for the next stage of his work before he knows what it is to be.

A good illustration of the ability to do that comes from doing—the access of strength, mental and physical, that exercise gives—is found in the story told by Cicero concerning Milo, the strong man of Crotona. The athlete expressed the wish that he were able to carry a live bull. He was advised to carry a calf every day until it was full-grown. He did so, and his strength increased with the need for it.

## Direction and Encouragement

#### (c) To direct, aid, and encourage the student.

The ability to study persistently and with concentration is an attainment that comes only with long practice. To the child, learning has no charms and the term *lesson* is replete with disturbing associations. In consequence, many ingenious methods have been devised for luring the beginner onward by rewards, and others even more ingenious for driving him.

It is an educational axiom that during the early years of mental training, a teacher is indispensable. There is something abnormal about a young child that will of his own accord seriously devote himself to study. Even a grown person, who has discovered how sorely he needs education, and who has, therefore, a motive for study that a child has not, will accomplish much more with aid, encouragement, and urging by a teacher.

## How Teaching Is Done by Mail

Since the student cannot be left to his own resources, the closest practicable imitation of the teacher's functions in the schoolroom must be realized in teaching by mail. This, the Schools have been learning to do more and more successfully year by year. Lesson Papers containing examination questions are sent to the student at intervals and in a fixed order. A careful record is made of the times when these Papers are sent, their titles, and every other fact that might be of value in guiding the work of the Instructor. All letters from the student and copies of all letters sent to him are filed so as to be instantly accessible, enabling the Instructor to ascertain quickly the salient points in the student's character—whether he is bright, or dull; painstaking or careless;

patient and plodding, or easily discouraged. The work done on each Paper, the amount of improvement, the faults observed, and all other data of importance are recorded. It is possible, therefore, to advise him as wisely, and to encourage and stimulate him as effectively as if he and his teacher were together. And since all aid, admonition, criticism, and communication of every kind are by correspondence, there is little occasion for the loss of temper, the impatience, or the partiality that so frequently impairs the teacher's usefulness.

Should a student prove to be slow or dull, he is put under the care of some peculiarly skilful Instructor in the Special Instruction Department, to whom the records and correspondence relating to him are referred. Henceforward, he is looked after by that Instructor, whose standing and salary are greatly dependent on his success with such students.

## Painstaking Oversight of Study

This aid and oversight must be as patient, as painstaking, and as thorough as could be exemplified by the most tireless and faithful teacher. And no sins of omission or commission in subordinates are punished more promptly or forgiven more reluctantly than carelessness or laxity in observing absolute good faith toward the student and loyalty to his interests.

(d) To test, from time to time, the thoroughness of the student's mastery of subjects.

"I am a very old examiner" says Professor Huxley, "having for some twenty years past been occupied with examinations on a considerable scale, of all sorts and conditions of men, and women too—from the boys and girls of elementary schools to the candidates for honors and fellowships in the universities. My admiration for the existing system of examination does not wax warmer as I see more of it . . . I am not alone in this opinion. Experienced friends of mine say that students whose careers they watch appear to them to become deteriorated by the constant effort to pass this or that examination. They work to pass, not to know; and outraged science takes her revenge. They do pass, but they do not know."

These criticisms are undoubtedly warranted by the facts. The daily press tells us frequently of ruined health, wrecked nerves, insanity, and even suicide caused by hard study, late hours, and tremendous mental stress and anxiety in "cramming for examination." And even when the student succeeds in passing, "he doesn't know."

#### Aim of Examinations

The method practiced by our Schools is not open to these criticisms. An extended experience has shown that while it reveals to the Instructor everything that he seeks to ascertain by it, it is at the same time beneficial to the student.

In our practice, examinations are designed to furnish answers to the following questions:

- 1. Has the student, by a proper mastery of his studies, received the benefit to which he is entitled?
- 2. Is this mastery such as to warrant the Schools in certifying to the student's competency?

A person that has our Diploma certifying that he has properly finished a certain Course is a custodian ever afterwards of the good name of the Schools. His subsequent success helps, and his failure hurts, them. A thorough examination, therefore, is due both to him and the institution whose reputation depends so largely upon the character of the work it has done for him.

Now, if this examination can be made to answer these questions with certainty, and at the same time be to the student a source not only of further profit but also of pleasure, its highest conceivable purpose will be served. All these ends we believe are realized by our method.

#### How Students Are Examined

With each lesson pamphlet are sent examination questions relating to its contents. The questions are usually numerous, covering every point of importance. There are, however, no questions intended merely to puzzle the student without instructing him. The examination is intended to be a minute and thorough review. The questions are so worded that the exact language of the text cannot be used in answering them. The effort both in thought and expression has the effect of graving the matter deep in the memory. The test is without hurry; it may require the student's spare time for a month or more. He escapes the usual fear of forgetting just at the critical moment. His Instruction Paper is constantly with him to refresh his memory. After studying some difficult point over and over, if he cannot master it, he may suspend his work and write to his teacher for assistance. And when finally he has finished his examination, what he has accomplished is something to be proud of-many pages of manuscript having the double value of a test in his studies and an exercise in composition. He sends his completed work for correction. of his Instructor must be thoroughly and minutely performed.

Errors in statement, as well as in spelling, punctuation, grammar, penmanship, and composition must be pointed out and explained, and the per cent. value marked. This is required to be high—not less than ninety—since the student may ascertain the correct answer to every question. Careless and inaccurate work is rejected and must be done again and again until it meets the requirements of the Schools.

Great care is taken in the employment and promotion of Instructors, all of whom are required to begin in the School of Mathematics. Applicants are admitted to the eligible list after examination in arithmetic, algebra, geometry, mensuration, trigonometry, and logarithms. After appointment, the Instructor is expected to master a technical Course and pass a searching examination on its contents. Increase in salary is dependent on the thoroughness with which this work is done. Merit is the only recognized test of fitness for promotion.

The student is encouraged in every possible manner to persist in his studies. If within two months after enrolment he has sent no Papers for correction, a letter is written urging him to diligence. If at the end of a year he has sent no work, he hears again from his Instructor. The intention of the management is that if he derives no profit from his Course, the fault shall be his own.

## Students' Aid Department

Connected with the Schools is the Students' Aid Department, the work of which has developed into one of great importance and magnitude. Its duty is to report to employers the standing and progress of such of our students as are in their employ, and to recommend suitable persons for places that are reported to us by employers who ask our aid in filling them. The heads of great industrial plants are learning that when they need men to do specific work they should apply to the institutions that educate such men rather than to employment agencies. During the last fiscal year, this department of the Schools has rendered assistance in increasing the salaries and securing the promotion of over twenty thousand students and has recommended to new positions nearly one thousand per month.

In these and many other ways, this institution has slowly won the confidence of the general public and the friendship of the men at the head of the great industries—an asset that will be indefeasible as long as the policy of the management continues to be what it has been up to the present time—inflexible honesty and fair dealing with all.

# Reception and Exhibit

AT INSTRUCTION BUILDING

The afternoon was devoted to a reception of guests at the Instruction Building. For convenient inspection the work of the various Schools and Departments was arranged in separate exhibits.

# **EXHIBITS**

### **EXHIBITS OF DEPARTMENTS**

INSPIRATIONAL PUBLICITY

INSPIRATIONAL WINDOW DISPLAYS

I. C. S. MESSENGER

ILLUSTRATING DEPARTMENT

TECHNICAL SUPPLY COMPANY

TEXTBOOK DEPARTMENT

#### EXHIBITS OF SCHOOLS

Architecture

LETTERING AND SIGN PAINTING

ARTS AND CRAPTS

MARINE ENGINEERING

ARCHITECTURAL DRAWING

MATHEMATICS

Chemistry

MECHANICAL DRAWING

CIVIL ENGINEERING

MECHANICAL ENGINEERING

CIVIL SERVICE

METAL MINING

Commerce

NAVIGATION
RAILWAY DEPARTMENT

COAL MINING

SANITARY ENGINEERING

ELECTRICAL ENGINEERING ENGLISH BRANCHES

STEAM ENGINEERING

LANGUAGES

SHOP AND FOUNDRY PRACTICE

TELEPHONE AND TELEGRAPH ENGINEERING

# Anniversary Banquet

OF THE

# INTERNATIONAL CORRESPONDENCE SCHOOLS

FIFTEENTH ANNIVERSARY OF THE FOUNDING OF THE INTERNATIONAL CORRESPONDENCE SCHOOLS

HELD IN THE

13TH REGIMENT, N. G. P., ARMORY SCRANTON, PA.

OCTOBER SIXTEENTH, NINETEEN-SIX

WILLIAM L. CONNELL, Chairman

Guests to the number of about 700 occupied banquet tables covering more than half the drill floor of the Thirteenth Regiment, N. G. P., Armory, which was converted into a vast dining hall, hung with the national colors and with white, blue, purple, and orange bunting covering the walls and ceiling and hanging in great streamers and festoons. The illumination was from frequently changed white and colored arc lights of great power, and moving displays of flowers and butterflies appeared on the curtain forming one side of the room. The occasion was enlivened with musical selections by Bauer's Orchestra and by vocal selections by Arthur T. Baker, of New York, in which the banqueters frequently joined. The gallery overlooking the scene was occupied by several hundred lady friends and relatives of the banqueters.

# ANNIVERSARY BANQUET

### **MENU**

30

BLUB POINTS

GREEN TURTLE SOUP

SALTED ALMONDS

CELERY

BOILED SALMON

SAUCE HOLLANDAISE

Cucumbers

FILET DE BOEUF A LA FRANÇAISE
PETITS POIS

POMMES DE TERRE DUCHESSE

TERRAPIN A LA PHILADELPHIA

ROMAN PUNCH

SQUAB CHICKEN

CURRANT JELLY

LETTUCE SALAD

ICE CREAM

FRUITS GLACÉS

FANCY CAKES

Méringues Chebse and Crackers

FRUIT

Coppee

CIGARS AND CIGARETTES
ROSBACH WATER

Catering by John C. Trower, Philadelphia

# ANNIVERSARY BANQUET

# Seated at the Speakers' Table were the following

#### Toastmaster

HOMER GREENE, LITT. D.
Author—Attorney-at-Law, Honesdale, Pa.

#### THOMAS J. FOSTER

President of the International Textbook Company, Scranton, Pa.

NATHAN C. SCHAEFFER, D. D., LL. D. State Superintendent of Public Instruction for Pennsylvania, Harrisburg, Pa.

#### HON, H. M. EDWARDS

President Judge of Lackawanna County Courts, Scranton, Pa.

#### WILLIAM L. CONNELL

Director of the International Textbook Company—Capitalist—Ex-Mayor of Scranton, Scranton. Pa.

COL. HUGH L. SCOTT, U. S. A.

Superintendent of the United States Military Academy, West Point, N. Y.

#### CYRUS D. JONES

Director of the International Textbook Company—President Peoples National Bank—Scranton, Pa.

REV. JOSEPH H. ODELL, D. D.

Pastor of the Second Presbyterian Church,
Scranton, Pa.

RT. REV. ETHELBERT TALBOT, D. D., LL. D.

Bishop (Protestant Episcopal) of Central Pennsylvania, S. Bethlehem, Pa.

#### THOMAS E. JONES

Director of the International Textbook Company—Capitalist, Scranton, Pa.

CHARLES S. HOWE, Ph. D.

President of the Case School of Applied Science, Cleveland, O.

GEN. OSCAR F. WILLIAMS

Ex-Consul General at Singapore, Rochester, N. Y.

# HON. J. BENJAMIN DIMMICK Mayor of Scranton

WILLIAM KENT, A. M., M. E.

Dean of the College of Applied Science,
Syracuse University, Syracuse, N. Y.

#### ELBERT HURBARD

Editor of the Philistine—Author and Lecturer, East Aurora, N. Y.

#### RUFUS J. FOSTER

Vice-President of the International Textbook Company, Scranton, Pa.

#### JOHN MITCHELL

President of the United Mine Workers of America, Indianapolis, Ind.

RT. REV. MICHAEL J. HOBAN

Bishop (Roman Catholic) of Scranton, Pa.

#### ELMER H. LAWALL, C.E., E.M.

Treasurer of the International Textbook Company—Mining Expert, Wilkes-Barre, Pa.

LIEUT. COMMANDER H. B. WILSON, U. S. N.

Navy Department, Washington, D C.

#### J. K. GRIFFITH, A.C.

Director of the International Textbook Company—Superintendent of Latrobe Steel Works, Latrobe, Pa.

#### HON. THOMAS H. DALE

Member of Congress from the 10th Pennsylvania District—Capitalist, Scranton, Pa.

EDMUND A. ENGLER, Ph. D., LL. D.

President of the Worcester Polytechnic
Institute, Worcester, Mass.

COL. CHARLES W. LARNED, U. S. A.

Professor of Technical and Military
Graphics and Applied Geometry, U. S.
Military Academy, West Point, N. Y.



REV. JOSEPH H. ODELL, D.D.

# ANNIVERSARY BANQUET

### Blessing

REV. JOSEPH H. ODELL
Pastor Second Presbyterian Church, Scranton, Pa.

We give thee thanks, O God, for all that is true, and honorable, and pure, and lovely, and for all that is of good report. Grant thy blessing upon all that we feel it right to do for ourselves, and upon all that we believe we ought to do for others. Give thy benediction to every effort to improve the body, the mind, and the heart, of our fellow men, that life to all may be more worthy of living.

Grant unto him who has been the inspiration of this organization, long life and wisdom, and an ample recompense for all his labors; and unto his fellow workers here assembled, vitality and joy in their callings; and unto all of us, openness of mind, and simplicity of heart, through Jesus Christ our Lord. Amen.



# **LETTERS**

Vice-President Rufus J. Foster read two letters, out of many received from persons who were unable to be present

### FROM THOMAS A. EDISON

FROM THE LABORATORY

OF

THOMAS A. EDISON

ORANGE, N. J., October 11, 1906

T. J. FOSTER, Esq., President, International Correspondence Schools, Scranton, Pa.

DEAR SIR:

I regret exceedingly that a previous engagement will prevent my accepting your very kind invitation of the 26th of September to visit Scranton on the occasion of the fifteenth anniversary of the International Correspondence Schools.

Although I cannot be present at the exercises, it is a pleasure for me to assure you of my familiarity with your great and deserving educational work. Please accept my congratulations on the successful outcome of your past years of labor and my most sincere wishes for the continued prosperity and public appreciation of the International Correspondence Schools.

Yours very truly,
THOMAS A. EDISON

### LETTERS—Continued

### FROM ROSSITER W. RAYMOND

Secretary of the American Institute of Mining Engineers

R. W. RAYMOND
MINING ENGINEER
99 JOHN STREET
P.O. BOX 223

New York, October 4, 1906

T. J. FOSTER, Esq., President, International Correspondence Schools, Scranton, Pa.

#### DEAR SIR:

It is with sincere regret that I find myself forced by the accumulated work of my office to forego the pleasure of attending the fifteenth anniversary of the founding of the International Correspondence Schools, in accordance with your kind invitation. But I take this opportunity to express my views concerning the enterprise which you have so successfully established. It will be understood, of course, that this expression is individual and not official, since the Constitution of the American Institute of Mining Engineers prohibits the endorsement of any outside proposition or enterprise by the Society as a whole or by its Council. Nevertheless, my position for twenty-two years past as Secretary of the Institute has given opportunities to know of the operations of your Schools, which I might not otherwise have had; and, to that extent, has naturally influenced my private judgment.

# Result of Recognized Forces

The history of what you and your associates have accomplished during the last fifteen years is like a romance. Yet, upon closer examination, it will be seen to involve nothing miraculous or fanciful but to be the orderly development of recognized forces.

In the first place, there was a great universal need and demand on the part of practical workers in this country for technical education. This demand led to the establishment of the Columbia School of Mines and its numerous successors; the incorporation

of popular and technical science in the columns of numerous trade journals, like the Iron Age and the Engineering and Mining Journal; and the formation of new professional societies. The American Institute of Mining Engineers, founded at Wilkes-Barre in 1871, had a profound influence among the practical miners and metallurgists of Pennsylvania. Its three founders, R. P. Rothwell, Eckley B. Coxe, and Martin Corywell, were Pennsylvania engineers; its first president, David Thomas, was a selfeducated Pennsylvania ironmaster; and its earliest list of members comprised the names of working miners, as well as educated chemists, engineers, and professors, residing in Pennsylvania. Moreover, burning questions of Pennsylvania industry, such as the waste of anthracite coal mining and preparation, the peril of firedamp in collieries and the best means and methods of colliery ventilation, the construction and management of blast furnaces and rolling mills, were discussed in able papers by the members of the young institute.

### Tidal Wave of Education

In the second place, there was a young newspaper man in Shenandoah who recognized the popular demand thus emphasized, and, through the Shenandoah Herald, the local Mining Institute, and other enterprises, did a great work in stimulating and satisfying the hunger of his constituents for knowledge. The way in which, from these small and geographically limited beginnings, Thomas J. Foster came to conceive, organize, and carry out the world-wide enterprise of the International Correspondence Schools, has been told elsewhere and need not be repeated here. time and inclination for personal compliment, this would be the proper occasion to heap deserved praise upon you. But, reserving such comment for the biographical notice, which I trust I shall not be called upon to write, I wish to point out how your large plan took advantage of the tidal wave of extra-scholastic education which has recently swept over this country, and is now transforming, in a most astonishing way, the intellectual life of the American people.

The needs of those who are too old or too busy to attend our day schools, academies, and colleges, were intended to be met, in some degree at least, by the night classes of such institutions as the Cooper Union in New York, with which I was for many years connected. That great gas-lit college, with its two thousand five hundred eager students and its waiting list of two thousand five hundred more, furnished a spectacle with which I have often

surprised and delighted visitors to the metropolis, and which, in many ways, furnished an impulse and example to similar enterprises throughout the country.

Another attempt to supply a similar demand was made through numerous summer schools, "Chautauqua assemblies," lyceum courses, etc. The present extent of this movement is scarcely suspected even by those engaged in it. There are today, in the states of the Middle West, six hundred "Chautauquas," lasting from ten to twenty days each, attended by many thousands of students, and providing lectures by the most eminent men of the country.

But it has long been recognized by educators that lecturers alone can do little more than stimulate the listener to further study; and there has consequently grown up an amazing network of university correspondence courses, embracing millions of home students.

### Success of Correspondence Instruction

The possibility of teaching technical science in this way was at first doubted. Such branches as mechanical drawing, physics, and engineering seemed to require the actual presence of the instructor. The degree of success which has been achieved, even in these departments, by the method of correspondence, has been a great surprise to me.

Of course, a boy who has time and money to spare for the purpose may still be heartily advised to take a full course in a regular technical school. He will be helped over hard places in his studies; he will be prepared for active, independent life by a transitional period of association with many comrades; and he will (or can, if he will) gain an all-around mental culture, the value of which should not be undervalued. But one who is already on his own feet in active life; who does not need to practice social functions as member of a college class; who must secure his all-around culture (if he is to win at all), not by prosecuting a thorough prescribed curriculum, but by supplying the deficiencies he has found by experience in his imperfect knowledge, and who cannot, if he would, give three or four years of his life to actual attendance in a school, may comfort himself with the thought of certain compensations.

From the standpoint of the general development of character and culture, a college course (under which term I include all technical courses conducted by classes) is undoubtedly beneficial. But from the standpoint of special acquisition in particular departments, the whole college system involves a dreadful waste of time and money. The progress of a "class" in any given department is necessarily planned to accommodate the average intelligence of the student and his other duties. And among these other duties the faculty is forced to recognize a certain proportion of distracting recreations, class societies and entertainments—athletic, dramatic, muscial, oratorical, etc.—all good, and all necessary, perhaps, to the average student, but all outside of his work as a student. It is true that provision is made for "special students" in our great technical schools; but even for such, the general organization and atmosphere is sometimes limiting or distracting.

### Special Value of Education by Mail

At all events, a man who knows what it is he wishes to learn. and who is willing to put into his endeavor all the time and strength he has, may find that he obtains more personal attention and help, and makes more rapid progress, in that particular thing, through the relation of correspondence with a competent instructor than through the general operations of a great systematic school. He would get, incidentally, at the school, a great many other benefits. If his years and means permit, I would heartily advise him to take the school. But there is no doubt that, in other cases, instruction by correspondence may have its special advantages. Given a competent instructor, the student's progress will depend wholly on himself-which is all that an American ought to ask. I am therefore not surprised at the testimony which reaches me from all quarters, of the practical benefits secured by students of all grades of previous training from study prosecuted in connection with the International Correspondence Schools.

In conclusion, I would recognize an additional and most important development of this enterprise, namely, the production of textbooks as an adjunct to the work of these schools. It is notorious that the best textbooks—in fact, nearly all textbooks—are produced by teachers. Actual experience with pupils is the best guide to authorship in this department. But the books so produced often leave much in the way of omission or obscurities to be remedied by the oral explanation of the instructor. In my judgment, instruction by correspondence involves an exceptional training of the instructor himself, leading him to forms of statement which will not require subsequent explanation, and to the careful presentation of many simple and rudimentary things which he would not deem necessary under other circumstances.

### Ideal Textbooks

A great jurist, one of the justices of the United States Supreme Court, once said to me, with regard to an argument before that tribunal; "Begin at the beginning and assume that we do not know anything. You will never know how much we do not know!" This principle might well be considered by the authors of textbooks. It is not merely the ignorant, but also those who once knew but are no longer sure, who look into such books, often in vain, for particulars deemed unnecessary by the distinguished authors.

I have made no such examination of the textbooks of the International Correspondence Schools as would warrant me in expressing an opinion of them; but in view of the considerations above set forth, I am not surprised to find that they have been adopted in many schools, and have been particularly praised for exceptional clearness of style and statement, and for the inclusion of many definitions and explanations most useful to the student and not always to be found in such manuals. This is what ought to be the result, if the instructors of these Schools have properly utilized their own great opportunity as learners; and that this is the result, shows conversely their worthiness for their work.

Congratulating you upon the success of the International Correspondence Schools, and trusting that they will maintain hereafter the high standard they have set up, I remain,

Yours truly,

R. W. RAYMOND



### CHAIRMAN'S REMARKS

#### WILLIAM L. CONNELL

Ex-Mayor of Scranton—Director of the International Textbook Company

#### GENTLEMEN'

Like the Chairman of the Board of Conciliation, I find that I hold over from the morning exercises to the Chairmanship of this evening.

Those of you who were present this morning, and heard the paper read by President Foster know that I have been a student of one of the Courses of the I. C. S.; and in assuming the study of that Course, I naturally fell into what he bore so heavily upon this morning—the study habit. With the study habit, came self-reliance, and with self-reliance came a willingness to obey the mandate of my educational chief. Again, Mr. President, I obey my chief, and tonight occupy the position of which I should have been relieved. (Applause.)

However, gentlemen, another thought and another desire made me willing to preside here. Years ago, I read a little poem entitled "What My Lover Said," and I heard one prominent man and one prominent paper say it was from the pen of Horace Greeley. Another authority attributed its authorship to some one else, and I want the matter cleared up, as I am sure you do also. I believe, gentlemen, that we shall hear tonight the real truth—shall learn who the real author of that beautiful poem is.

When we looked over the available timber for Toastmaster for this occasion, our eyes went over the Moosic mountains into a certain little valley, into a little country town, and we believed that a certain poet, lawyer, author, had buried his greatness long enough, that it was time he came out into the lime light, so that even Scranton and the adjoining counties might know, with me, who it was that with such rare art failed to tell "What My Lover Said."

Gentlemen, never have I had more pleasure than in introducing as the Toastmaster of this occasion, Mr. Homer Greene, of Honesdale, as I said before, the poet, the lawyer, the author. (Applause.)

# Post-Prandial Addresses



HOMER GREEN, LITT. D.

### TOASTMASTER'S REMARKS

# HOMER GREENE, LITT. D. Author, Attorney-at-Law, Honesdale, Pa.

MR. CHAIRMAN, MR. PRESIDENT, AND GUESTS OF THE INTERNA-TIONAL CORRESPONDENCE SCHOOLS:

We are first of all, American citizens. We are patriots. And I therefore propose that we all rise and drink to the health of the President of the United States. (The toast was drunk.)

Now, Mr. Chairman, I am surprised that a gentleman who holds the quasi judicial position on the Conciliation Board that my friend Mr. Connell does, should on an occasion of this kind, in this public manner, call attention to the poetical sins of my youth. I want to say to him, that for the last thirty years I have been trying to earn my living honestly in the practice of the law. (Laughter.) And I want to say, moreover, that the alleged poem to which he has referred, was written thirty years ago; therefore if there was a crime in writing it, it is outlawed, and the statute of limitations has run against it.

The chairman has doubtless read the story of "The Lady or the Tiger," and he has taken his choice between the lady and the tiger; and he can take his choice tonight between myself and Horace Greeley.

## Distinguished Audience

Now, speaking seriously, there are not among the honors that have been accorded to me in my lifetime, any greater than the honor of having been chosen to act as Toastmaster at this banquet. It falls to the lot of but few men—and to those but once in a lifetime—to introduce such speakers as are on this list, to such an audience as faces me tonight; and it is moreover a position of great responsibility. To fill it requires a degree of courage that borders on rashness. I understand that in the entire city of Scranton, no man was found brave enough to undertake the task. (Laughter.) Even my good old friend and neighbor, the Mayor, who is willing to tackle almost any job, rebelled at this. But over in Wayne

county, in the quiet, placid, gently shaded streets of Honesdale, the projectors of this good feast found a man who had enough nerve, enough assurance, enough recklessness, to undertake the task.

I notice that the gentlemen who administer the affairs of this great Institution are accustomed to finding what they seek; and when they want a Toastmaster on whom care and responsibility and prudence sit as lightly as does age upon the honored head of the founder of this Institution, they know where to go to get one. (Applause.) And when they want to serve a banquet unexcelled by any in the history of any of us, they give the order—and it is done. And when they want as guests at their banquet the representative men of Scranton, of Pennsylvania, and of the entire East, they issue the invitations—and behold! the guests are here. And when they want the most illustrious speakers of the day to address their not less illustrious guests, they bid these gentlemen come—and they are here at their bidding.

### A National Institution

Now, the city of Scranton is made up of men who do things, and there is no better illustration of that fact, than the history and progress of these International Correspondence Schools. And yet this Institution is not local. It is in no sense provincial. It is national. And its scope is no less vast than the universe. He who makes two blades of grass grow where one grew before is really more than a benefactor to humanity.

These people have made a thousand blades of grass to grow where one grew before; and if you doubt the beneficence of their work, go ask the multitudes of young men and women endowed by nature with ambition, with brains, with energy, but handicapped by poverty, who have been enabled through the genius of this man and through the work of these Schools, to push up to a higher plane of life, and to better things.

## Better American Citizenship

I tell you sir, that the thousands and tens of thousands of evening lamps that are burning all over this continent tonight, by reason of your genius and the work of these Schools, are lighting the way to a higher American citizenship for a greater percentage of American people than you or I have any conception of as we sit around this table. (Applause.)

"The heights by great men reached and kept,
Were not attained by sudden flight;
But they, while their companions slept,
Were toiling upward in the night."

And I say, all honor and long life to this man and to his Schools who has put it into the power of these toilers of the night, to find fulfilment of their ambition and their hope, to rise on stepping-stones—the stepping-stones of their dead selves—to higher things.

### Mighty Educational Influence

The founder of this great Institution builded better than he knew. I dare say, that that which has come to pass today, surpassed his most daring dreams; for this Institution is no longer a mere individual enterprise. It is no longer a mere experiment for personal profit. It is no longer a mere channel for corporate gain. It has passed far above and beyond all that. It has made Scranton today a center of a mighty educational influence felt throughout the civilized world. And it deserves as much credit, as much repute, as much honor in its line of work, as Yale, and Harvard, and Princeton enjoy in theirs. And it is this fact that has enabled it to gather around this board tonight the representative men whom you see here, men who are glad to attest by their presence their appreciation of the great work that these Schools have been doing-men, some of whom you are anxious to hear. And I want to say that in addition to the names that appear in the toast list, I shall doubtless call upon two or three men of national reputation who are here tonight, to supplement that list; and I shall call, in conclusion, upon the President of this Institution to say "Good Night" to us all before we go home, and I trust that no one will leave until he has done so.

Not long since, an express train on the New York Central Railroad, running at the rate of forty miles an hour, was nearing the Grand Central Depot in the city of New York. Mark Twain was a passenger on the train. A lady across the aisle leaned over and said to him, "I beg your pardon, but can you tell me if this train stops at the Grand Central Station?" "I hope it does, madam," replied the irrepressible Mark; "I hope to heaven it does, for if it doesn't, there will be a devil of a wreck."

My oratorical train is just about reaching its terminus, and I propose now to pull my little post-prandial engine into the depot in order to avoid any sort of a wreck, and to bring out from the roundhouse speaker-engines that are bigger and braver and better and brighter than mine.

### A Wonderful Age

In introducing the first speaker on the list, I want to say that we have often heard the expression—I have heard it so often it has become worn out—that this is a wonderful age; and yet this saying is wonderfully true. Science is invading realms, the glories and the possibilities of which were never dreamed of by our fathers and grandfathers. When I was graduated from the Engineering School of Union College in 1874—I did not mean to give that date, because like my friend Charles Emory Smith this morning, it enables the ladies to know how old I am; but I have told it—when I was graduated from the Engineering School thirty-two years ago, at that time electricity was applied generally to but one of the arts, the art of telegraphy. Today it moves the commerce of the world. And yet that is but one of the marvels of the age. The field of the technical scientist is vast, broad, and to a great extent untrodden, and no one knows this better than the Dean of the School of Applied Sciences of the Syracuse University.

It is told of two Irishmen who were crossing the ocean on their way to this country that on the voyage over one of them took ill and died, and there was a burial at sea. In place of the weights that they commonly use, or in default of those weights, they were obliged to use chunks of coal. Pat came and looked upon his dead friend Mike lying there with the chunks of coal and the shroud, and presently he said, "Well, begorra, I always knew you were going there, but be jabbers, I didn't think they would make you take your coal along."

It is like bringing coal to Newcastle, to bring the head of the great Technical School in Syracuse to the great Technical School at Scranton, but he is here tonight, and he has brought his coals with him. And he will address us with a tongue of fire—Dean William Kent.







WILLIAM KENT, A. M., M. E.

## TECHNICAL EDUCATION

#### WILLIAM KENT, A.M., M.E.

Dean of the College of Applied Science, Syracuse University, Syracuse, N. Y.

MR. TOASTMASTER, PRESIDENT FOSTER, AND GENTLEMEN OF THE INTERNATIONAL CORRESPONDENCE SCHOOLS:

I bring you greeting from one of the great universities of this country, and I think I may say, that I represent the other representatives of the universities here tonight in bringing congratulations to the International Correspondence Schools, and in wishing them Godspeed and success in their future work.

I have been somewhat paralyzed by this lawyer and poet, and I don't know whether he is all that he has tonight been described to be. He has poured forth a flood of eloquence which I know I can never aspire to, but it has not yet been revealed to this audience that he is a mind reader. He has had the audacity to steal my sentiments, not by actually burglarizing my pockets and going through my papers; I do not accuse him of that, but worse than that—of actual mind reading, to the extent that he in his speech got out the very first sentence I had written for mine. Here it is: He who makes two blades of grass grow where one grew before (laughter) is a benefactor of humanity. Now, think what a position I am put in. This whole paper of mine is about "grass," and I have got to read it. It is here:

# Increases Material Prosperity

I don't know who first made that statement about grass; it was not made by me; but whoever made it, uttered one of the profoundest and far reaching truths on political economy. Make two blades of grass grow for every one that grew before on the poorly kept lawn in your front door yard, and you not only gratify your own esthetic taste, but that of your neighbor, and you add to the beauty of the town. Double the grass crop in your pasture lot, and you not only make more and better milk, butter, and cheese, and thus increase your own wealth, but you stimulate commerce in these articles and add to the wealth of the world.

Double the grass crop of the United States, and financial prosperity comes not only to the farmers but to the whole country, and the benefits are felt in every part of the world to which American farm products are carried.

And what is true of grass, is true of every article of value grown on the farm or dug from the mine or manufactured in the shop or produced by the intellect or genius of man.

It is a fundamental fact in political economy that the increase of the wealth of a country or of the world, is chiefly the increase of the sum total of things produced, of cattle, of tons of coal and iron, of buildings, of locomotives, of automobiles and ships, of things to eat, of things to wear, of things that delight the intellect or the artistic sense. Even that part of the wealth of a country that is reckoned as the "unearned increment," the increase in the value of land or of railroad bonds and stocks, results primarily from the increase of material things produced, for the increased value of a corner lot comes from somebody's building structures of iron, brick, and mortar around it, and of somebody's building an electric railroad to run near it; and the increased value of railroad stocks and bonds comes from the increase of the products of farm, mine, and shop, which the railroad carries.

### Better Chance for the Individual

The second fundamental fact—really a self-evident proposition—is that the greater the number of things produced, the more wealth there is to be divided, and as the wealth of the country increases, there is, with any fair system of distribution, a better chance for each individual to get a larger portion of it; so that, generally speaking, the increase of wealth of a community tends to increase the wealth of every man in it.

My proposition then is this: that it is to the interest of both the working capitalist and the working laborer that the wealth of the country should increase. There is then no conflict or difference of interest between capital and labor, as far as production is concerned. Both have an interest in the increase of wealth. The only conflict that can arise is regarding distribution. This is a question on which I shall not enter further than to express the opinion that the common sense of the American people, with the better education of both capitalist and laborer as to their several rights and duties, will ultimately lead to its proper solution.

The most important statistical fact in the political economy of our time is the enormous increase in the production of wealth of the civilized world during the last hundred years, and more especially during the last thirty years. It began with the utilization of coal to do the work of the world, through James Watt's invention of the steam engine. The progress was comparatively slow until about 1870, but since that date it has been tremendously rapid.

### Education Increases National Wealth

The chief factor in the increase of wealth in the last thirty years has been the great number of men technically educated in the several arts and sciences connected with material production. Ever since the school began turning out men educated in chemistry and in mining and mechanical engineering, the intellectual activity of these men has been chiefly devoted to the one purpose of increasing the material wealth of the world. Tredgold's definition of engineering is: "the art of directing the great forces of nature for the use and convenience of man." The greatest available force of nature is the force derived from the burning of coal, and the art of directing this force is the art which is taught in technical education.

Thirty-five years ago a small group of men conceived the idea that the best way to train a man so that he could most effectively direct the great forces of nature, was to give him a thorough education in the principles of mathematics, applied mechanics, chemistry, and the construction and use of machinery, and that this kind of education could best be given not in the shop, but in a new kind of college, a college of mechanical engineering. Such colleges were founded first by private endowments, and later by state grants. They began turning out graduates, only a few of them at first, and for them there was no demand, for the world had not discovered that such men were needed. But they found their jobs. By the work they accomplished they proved the wisdom of the founders of the colleges, and then the demand grew. Now some thousands of these graduates are turned out every year, and the demand has increased as fast as the supply.

### The New School for the Masses

Fifteen years ago, one man, Thomas J. Foster, conceived another idea, that there is another method of giving a man a technical education, the method of the Correspondence School. This School was not intended to be, and is not in any sense a rival of the technical college. It was not for that very small fraction of

the population who first had the opportunity and the ability to graduate from a high school or an academy, and afterwards had the opportunity and the desire to spend four years more in getting the higher education; it was for that vastly larger fraction, the men of maturer age who were at work and who desired to get a technical education while still at work. Some of the amazing results of the Correspondence Schools we have heard and seen today. In fifteen years they have had more students and turned out more graduates than all the technical colleges put together have in thirty years, and now they have an annual enrolment about equal to that of all the universities, colleges, and higher grade technical schools in the country.

But the results of technical education, whether of the college or the correspondence school, are not to be measured merely in statistics, nor in dollars and cents. He who makes two blades of grass grow where one grew before is a benefactor, not only of himself, but of humanity. He who improves his intellect, so that it gives him the capacity to produce two dollars where he produced one dollar before, cannot measure the whole result of the improvement in mere wages. His intellectual advancement is the intellectual advancement of the community and of posterity, and that cannot be measured in dollars. Not only does technical education contribute to industrial progress, to the increase of the wealth of mankind, and to intellectual advancement; it must also contribute The technical student is brought face to face to good morals. with the laws of nature and of science, which are laws of truth. To be a good technical student a man must be honest with him-He must face difficulties and honestly overcome them. must have the virtues of soberness, patience, perseverance, and He must be an all-around good citizen.

We have considered two great systems of education, the immediate financial results of both of which are the increased earning power of the individual and the increased wealth of the community, and the indirect results of which are the intellectual and moral uplift of the race.

# Wealth Through Trained Workers

There is a third system of education of which little has yet been heard in this country. It is industrial or trade schools for the great mass of young men who intend to earn a living at the mechanical trades, and who cannot learn the trades in the shop on account of the decay of the apprentice system. We are far behind Germany and France and Switzerland in these matters, but we have made a beginning, and the Williamson Trade School near Philadelphia is a noted example. Statistics collected by Mr. James M. Dodge, president of the Link-Belt Engineering Company, have shown that the graduates of this school have an increased earning power after they reach the age of twenty-two years, as compared with men of the same age who have had only shop training. This is a most important economic fact. Increased earning power of the workman means increased wealth of the world. The trades school, with the correspondence school and the technical college, is also making two blades of grass grow where one grew before, and is therefore a benefactor of humanity.

In a notable address delivered in 1890, the late Abram I. Hewitt characterized the invention of Bessemer steel as an epochmaking event which alone ranked with three other events, the invention of printing, the discovery of America, and the invention of the steam engine, which has changed the face of society since the Middle Ages. To these we must add a fifth, the rapid development within the past thirty years of useful education in the three systems of the technical college, the correspondence school, and the trade school. May these three systems continue to grow side by side with only friendly rivalry, and to do still better work in the material, intellectual, and moral advancement of mankind. (Applause.)





ELBERT HUBBARD

### THE STUDY HABIT

#### ELBERT HUBBARD

Editor of The Philistine, Author, Lecturer, East Aurora, N. Y.

MR. TOASTMASTER, MR. PRESIDENT, GENTLEMEN OF THE INTERNATIONAL CORRESPONDENCE SCHOOLS, AND INVITED GUESTS:

It is a great pleasure to meet you here tonight. I say this for two reasons: one, because you expect me to say it; because you will feel badly if I don't say it; and the second reason is because it is true. (Laughter.)

Now, I want to make you a startling proposition—one of my original things. Get it down. "He who makes (laughter) two bats grow where there were no bats before"—boys, let's cut the introductory.

The other day in Chicago, I called on a professor of physics; and when you call on a professor of physics, you must talk about electricity. If you don't know what to say, I will tell you what you will say. It is this: "Oh, electricity! a great mystery! Nobody knows anything about it! It is manifestation!" That is what you will say—unless he says it first.

You are perfectly safe in saying this. You will never shock anybody, ladies present, or young men present; it is all right. "Electricity is a great mystery; nobody knows what it is." I was just going to say it when he said it. "Good by," I said.

### An Educated Motorman

I walked down the steps and caught a trolley car. Over the the head of the motorman I saw a sign, "Don't talk to the motorman." This suggested an interview. (Laughter.) And so I said, "Pardner, what is electricity?" "The juice," he said. He knew. (Laughter.)

I asked, "Where do they get it?" "Oh!" he said, "it's everywhere. It allus wuz. Edison didn't invent it." "Well," I said, "Where do you get it?" "Oh!" he says, "It's everywhere. It's God's greatest gift to man." I said, "I thought

woman was God's greatest gift to man." "Same thing," he says. (Laughter.) "Electrical manifestation. Very dangerous if you don't know how to handle it." (Laughter.)

"Why," he says; "Look here." He gave the wheel a turn; the car shot forward. "What?" I said, "does electricity make this car go?" He said "Yes." I asked him "How?" He explained it to me. He says, "I have taken the Electrical Course in the International Correspondence Schools. I know." (Laughter.)

He says, "I am getting ready for a better job." He carried us ten miles in perfect safety. We stopped a dozen times—stopped within six inches of where we wanted to stop. I got off the car. "Good by," I said, as I jumped off. "Good by, pard," he said. He didn't even look up at me. He didn't know I was the great literary light. (Laughter.) He didn't care. He was just intent on doing his work. I looked back at him, and I said, "There goes an educated man. He is 'on' to his job." And the educated man, boys, is the man who is "on" to his job, and who is getting ready for a better job.

### What Real Education Is

What do I care whether he has had any college course or not? I don't care whether he has been to Syracuse. I don't care whether he has "Litt. D." behind his name, as this gentleman first on the program, or "Big D." No. If he is "on" to his job, if he earns a living, if he adds to the wealth and to the happiness of the world, and if he is getting ready for a better job, he is an educated man.

There is no science of education. If there were a science of education, you could take so much boy and so much curriculum, and mix them, and produce so much truth and so much economy; but when you send your boy to Phillips Exeter, for two years, and Harvard for four—and when he comes back, and you have to support him the rest of his life, you cannot say that there is any science of education.

The science of education is a little like the law of heredity. The law of heredity is that law of our nature that provides that a man shall resemble his grandmother, or not, as the case may be. (Laughter.)

You know, and I know, that some of the best educated men in the world today are men who never had college advantages; and you know, and I know, that the men who have struck "thirteen" in every department of human endeavor were not college men. What college taught Lincoln the art of statesmanship? What college of art taught Rembrandt how to mix his wonderful colors—the greatest portrait painter the world has ever seen—dead and turned to dust two hundred and fifty years ago, and we cannot even imitate him today. What college of oratory taught Ingersoll how to make a speech? What college taught John Mitchell how to marshal forth and influence four hundred thousand men—half a million men, and cause them to march on and on to human betterment—to own themselves? (Applause.) What college taught our dear friend here, how to set a million men learning the Study Habit? Why, these men were self-taught; and every man at the last, who has an education, is self-taught.

### The Hope of the World

College cannot give you an education. You can send your boy to college, but you cannot make him think. There is a difference between going to college and being sent to college. And the hope of the world lies in this: that the educated men of the world know the futility and the foolishness and the fallacy of so much that has passed for education in the days gone by.

There is only one thing you can be dead sure of, when you send your boy to Harvard or Yale or Princeton or Dartmouth—only one thing you can bet on—and that is, that he will learn to smoke cigarettes. That is one of the habits he will acquire there—but whether he acquires the Study Habit or not, is the problem you have got to leave to the infallible dice.

Oh, yes! I know; this is all "sour grapes," isn't it? It is not, boys. I have a few college degrees of my own, and I usually carry them with me, like my friend here who has an alphabet behind his name on the program. Yes, sir; he acknowledges it himself. (Laughter.) He makes no endeavor to conceal the fact that he is an educated man. He is not ashamed of it. No, sir; look on the program. (Laughter.)

I did call on an educated man the other day, out in St. Paul—Mr. James J. Hill. Mr. James J. Hill, when he was forty-six years of age, was station agent in St. Paul. He was earning eighty-five dollars a month. Now, I know he was a candidate for Oslerism, and I put this proposition to you for the encouragement of the gentlemen who are present here tonight, who are also candidates for Oslerism. When Hill was forty-six years old he went through bankruptcy.

### Opportunity's Anvil Chorus

Do you know the greatest poem ever written by an American—"Opportunity," written by John J. Ingalls, of Kansas? They produce everything in Kansas. But poetry is one thing, and truth another. The burden of that song is this: that opportunity knocks once at each man's door. That is poetry.

I don't wonder my friend wanted to prove an alibi. is another thing. The real fact is, you cannot get away from opportunity in America. When he knocks at your door, you had better get up and let him in, or vour panels will suffer. Opportunity waits for you right behind the corner with a stuffed club. You cannot get away from opportunity. The only way is to lie right down and die. Where would the International Correspondence Schools be tonight, I wonder, if we had put that Oslerism idea into effect sixteen years ago? (Laughter.) Our President was just getting going. Sixty-odd years young. Getting old is a bad habit, and you want to acquire good habits, boys, and if you have the Study Habit you are in the line of fame. Don't shed any tears about this thing of college education. If you get an education in college, so much the better; that is all that college will give you. Lots of persons go through and it doesn't take at all.

I called on James J. Hill. There are three men who own five-eighths of the railway mileage of America. This does not prove they are good and virtuous characters—it proves they have money. This man is an educated man. The first thing he said to me was this: "I have been wanting to see you for some time," and I was just like this—all goose flesh, you know, because I had a very delicate errand with him. I wanted a pass to Seattle; and waiting in the entry way of his office was another man, and he had a regular alphabet behind his name, too, with titles around and across. He wanted passes to Seattle.

# A Man With the Study Habit

And the great man said to me, "I have been wanting to see you for some time. Why on earth do you say that Rembrandt was a greater painter than Rubens? I have read your book. Not one of those paintings you mention is authentic." He knew the Dutch school through and through. I had written a book on it—which does not prove that I know anything about it, because we always talk most about things we know least of. (Laughter.)

So he explained it to me. He knows the Dutch school by heart. He has the best collection of art owned by a private individual in America. I went with him in his private car for one day, and in a little shelf over his desk he has a collection of authors—Ruskin, William Morris, Longfellow, Emerson. He has the Study Habit. He is finding out things; and while we were in the car, a man came in—one of the smart newspaper fellows, you know, and he thought he would puzzle the old man a little. He said, "Mr. Hill, do you like the Black Essex?" He thought Mr. Hill would not know what the Black Essex is. So he asked, "Do you like the Black Essex?" 'Yes," replied Mr. Hill; "I raise them."

- "What do you feed them?"
- "I feed them ground oats and meal."
- "Wet or dry?"
- "Dry."
- "Well," said the fellow; "Mr. Hill, do you not know it takes a pig three times as long to eat dry feed as wet?"
- "I know that, young man; but what do you figure a pig's time is worth?" (Laughter.)

The Black Essex is a party without the Study Habit. No difference whether he eats dry feed or wet.

I know, you wonder whether I got the pass.

But Mr. James J. Hill is a graduate of the university of art. He went through bankruptcy at forty-six. But so wonderful is this web of life, that we grow by antithesis. Worse than this, he was born in Canada. (Laughter.) But he overcame the handicap, and today we call him the strongest railroad man in America—this man that hailed from Canada.

### Canada's Strongest Man

But just to even things up, the strongest and best man that Canada has was born in Illinois. He had the felicity to be born within fifty miles of where I was born. (Laughter.) A very wonderful soil. Sir William Van Horn—country boy, yes. He warmed his feet on October mornings where the cows lay down, and the fellow that has not done that has got to go back and get the experience—in another incarnation. He learned to be a telegraph operator; improved his time, made sketches and designs, and became a very proficient artist. Yes, a fellow whose canvasses had a market. He became assistant train-despatcher—train-despatcher, general freight agent, traffic manager—Canada wanted Sir William Van Horn.

I saw him two years ago. What do you think he was doing? He was making designs for a book his daughter had written, and he just for the fun of the thing was using his brush making water colors; a man with a universal, all-around education—a man who is not preparing to die, put who is preparing to live—an educated man with the Study Habit.

I got the pass, boys. I went up to Butte. They told me of a wonderful girl. They said she was a genius. I have never seen a genius, and I have looked into the mirror a few times. (Laughter.) They said, "You should go and see this wonderful girl." And I went. I rang the bell, and her mother came to the door. "Mary isn't here; she has gone to Boston to complete her education." I wonder if she really thought she could complete her education in Boston. If so, it is the only place in the round world where you can.

### Getting Ready for Tomorrow

There was a man who used to talk about education, who knew about as much about it as I. He is dead now. I refer to the late Socrates. (Laughter.) His pupils came to him one day and said, "Socrates, what kind of people shall we be in Elysium?" "You will be the same kind of people in Elysium as you are right here. Yesterday I got ready for today, and today I am getting ready for tomorrow. I am getting ready for the higher growth. I am going to school. If there is another world, I don't know a better preparation for it than to live right here now."

He was "getting ready for a better job." He had the Study Habit.

Now, over in England two or three years ago, I was invited to a banquet; and I was seated next to the Earl of Yarmouth. We were both getting a square meal for nothing. We were taking great joy in our work. (Laughter.) We discussed the race problem; we settled the coal strike; and finally we got around to economics, and the Earl said to me: "In America, you know, in America," he says, "you have no leisure classes." I said, "Yes, we have; we call them 'hoboes'." (Laughter.) And he smiled, and I smiled; but I knew what I was smiling at, and he didn't know what he was smiling at. He says, "Very droll, most amusing; most amusing." And he said, "What is a 'obo?" I said, "You're (Laughter.) one.'' Only I said it to myself. (Laughter.) I knew he would never appreciate it. The point was entirely too subtle for him. I never cast my jokes before swine. But it

just came to me that he was a hobo. There is no difference or choice between him and "Weary Willie of Pittsburg." Well dressed; that is all right; but if somebody didn't buy him clothes and send him remittances, in a little while he would be wearing clothes exactly like the clothes worn by men of the hobo class. It is just a mathematical proposition. He lives on the labor of others, on the labor of men who are dead. He is a hobo.

### Civilization's Problem is the Study Habit

Yes! And the problem of civilization today is to eliminate the parasite. We live in the richest country the world has ever seen. There is wealth enough for everybody. Yes, and there is work for everybody, and there is not too much work for anybody; if everybody would work a little, nobody would be overworked. No. The reason of some people having to work from daylight until dark, and their work is never done, is because some other people never work at all.

We used to educate men who didn't work, and when you talked about an educated man, you meant a man that didn't work. And when you talked about a working man, you meant a man who had no education. But this will never be a civilized country until every man works, and until every man has an education—until every man has the Study Habit. (Applause.)





NATHAN C. SCHAEFFER, D.D., LL.D.

## THE PUBLIC SCHOOLS

NATHAN C. SCHAEFFER, D.D., LL.D.
State Superintendent of Public Instruction, Harrisburg, Pa.

#### MR. TOASTMASTER AND GENTLEMEN:

One year ago, when I happened to be in San Francisco, about the first question that was put to me was, "What do you know about the International Correspondence Schools at Scranton?" I shall not tell you in how many states that question has been put to me, for fear that you might find out how much of a "globe trotter" I am. Sometimes that question is embarrassing, especially when I visit a city that has a correspondence school of its own. They always claim that their school is the "model" correspondence school.

Last week President Foster and I learned the application of a story that I propose to use hereafter. A gentleman in the South was introduced as a model toastmaster. He arose and said that he accepted the compliment because it reminded him of a certain lady in his own city who was visited by a committee of the Women's Club, and this committee informed this lady that she had the model husband of the city. The lady was very much surprised, but when the committee had gone she turned to the dictionary and found this definition: "Model, a small imitation of the real thing." (Laughter.) Now, these correspondence schools in other cities are "models," but Scranton has the real thing. (Applause.)

#### Scranton to the Rescue

This is not the first time that Scranton has come to the rescue of the public-school men. When I had forty mandamus suits at court pending against me, it was a Scranton lawyer who won every one of them for me; and if I had my way tonight, that Scranton lawyer, instead of having a lower limb in plaster of Paris, would have his feet under million-dollar mahogany in the state capitol. (Applause.) I cannot refrain from wishing for the speedy recovery of your honored fellow citizen in Scranton, Deputy Attorney-General Fleitz.

Another Scranton man, some years ago, came to the rescue of the common-school system. The two greatest problems in school administration are: first, to get all the children to school; and second, to get good teachers into all the schools. Now, it was a Scranton member of the lower house who passed the first law making the attendance at school compulsory; and it was the same member from Scranton who gave us our free textbook law, which makes it easy for the laborer's son to go to school, and through the high school. And I want to say that Scranton has need for its Watres. And when the day shall come that you Scranton people will make your famous Watres Governor of Pennsylvania, and when you will send John Farr back to the Senate, then you will have another new epoch in the history of public-school education in Pennsylvania.

## I. C. S.—"I See Dollars"

And I want to say right here, that the establishment of the International Correspondence Schools marked an epoch in the educational development of Pennsylvania. When the average Pennsylvania boy sees those letters, I. C. S., he puts two strokes through the letter S, and then it reads, "I see dollars." (Applause.) There is a time in the life of the average boy when he holds the almighty dollar so close to his eyes that he can see nothing else in God's universe, and it is then that he wishes to quit school, and often does quit school. Sometimes it is dire necessity that makes the boy quit school. And it is then, after he has tried the hard knocks of the world, that he begins to see that these letters "I. C. S." stand for "International Correspondence Schools," and that he can make more dollars by taking Courses in that School.

In other words, the multitude of boys and of girls who are obliged to quit the public school too early can supplement their education by what these Schools offer to them.

# Prepares for Higher Lives

Now, I should not be satisfied if the public schools should do no more than hold the dollar before the eye of the boy or the girl. Dollars alone never can make life worth living. If you are rich, you may buy a fine house, but you cannot buy a happy home. That must be made by you and by her who occupies it with you. If you are rich, you may buy a splendid copy of Shakespeare; but the ability to enjoy a play of Shakespeare—that is

the result of schooling, of study, of education, and when the International Correspondence Schools of Scranton develop in a boy the power to study, they make him fit to enjoy the things of the higher life in the direction of thought; for after all, our public schools are a failure if they don't, as the result of their teaching, make the boy able to think the best thoughts of the best men, as these are enshrined in literature—make the boys and the girls able to think the thoughts which God has put into the starry heavens above and into all nature around us.

Now, in one respect, these Correspondence Schools differ from our high schools and our colleges. They have no football, and no baseball, and no highball, and no evening ball. (Laughter.) seem to mean business, study, work, in the direction of the acquisition of knowledge, and the development of technical power. Now, in one respect my friend Mr. Foster and I differ very radi-Perhaps I can best tell you the difference by giving you an experience of mine—there is a friend of mine in this audience who vowed that he would give me no peace this side of purgatory, if I didn't tell that experience tonight. One day, one of my little girls came home from school, and she said, "Papa, who is richer; a man with seven children, or a man with a hundred thousand dollars?" Well, we have reached the sacred number of seven in my house; I have a sort of a Rooseveltian family. "Of course," "Why?" asked the I said, "the man with seven children." youngster, and then the daddy was stuck. In my despair, I at last turned to the child and said—an eleven-year-old-girl—"Well, why do you think that a man with seven children is richer than a man with a hundred thousand dollars?" And quick as a flash she replied, "A man with a hundred thousand dollars wants more, and a man with seven children has enough." (Laughter.)

Now, my friend President Foster claims to have nine hundred thousand students, and he has not enough. He wants more.

## Education in Pennsylvania

When I was at Richmond some years ago, I boasted that in Pennsylvania we have a university that counts its buildings by tens, its professors by hundreds, its students by thousands, its endowment by millions—and I added that we have thirty thousand teachers, and over a million pupils in the schools. When I made that statement a Massachusetts Yankee turned to one of my friends and said, "Does he mean it, or is the Dutchman lying?" (Laughter.)

The average Massachusetts Yankee can form no conception of the grandeur of the population of the great state of Pennsylvania. We have today over eleven hundred thousand children in the public schools, and we have almost one hundred and fifty thousand more in our parochial schools. I am afraid, however, that if these Correspondence Schools keep on awhile longer, they will have more students than we have. But as long as this Institution helps the boys and the girls to continue their education from the point where our work for them ended, we shall wish it all progress and prosperity.

My ten minutes are almost up; and I know of no better way of closing this speech, than by applying a motto that became familiar to my ears in my university days—applying that motto to your Correspondence Schools here at Scranton. In my university days, I used to hear three Latin words: "Vivat, crescat, floreat." And I say of the Correspondence Schools at Scranton, may they live, and grow, and flourish." (Applause.)





JOHN MITCHELL

# EDUCATION: THE WAGE EARNER'S OPPORTUNITY

# JOHN MITCHELL

President United Mine Workers of America, Indianapolis, Ind.

#### Mr. Toastmaster and Gentlemen:

I esteem it a very great privilege to have this opportunity of paying my humble tribute to the distinguished gentleman who founded these great Schools, and to his associates who have developed them to their present magnificent proportions. I have carefully watched the growth of these Schools, and I am familiar with their splendid accomplishments. Possibly there is no class of workmen who have profited more, or who have needed their advantages more, than the people whom I have the honor to serve. I have known hundreds and hundreds of men denied the opportunity of early education, who have grown to manhood, illiterate and ignorant, ashamed to confess their illiteracy, ashamed to reveal their ignorance by attending the night schools; these men by scholarships in the International Correspondence Schools have secured a good general and technical education, and now hold positions of profit and responsibility.

#### Problem of Labor is Education

Another thing inseparable from the great problem of labor is the education of the workingman. That we have a labor problem in our country cannot be denied. That this problem must be solved by the workingmen themselves is undoubtedly true. That it cannot be solved by the ignorant or illiterate, I believe all men will agree. This problem of capital and labor, this relationship of the employer to the employe, must be solved by the enlightened, educated intelligence of the workingman. I am one of those who believe that education makes men intelligent and sanely discontented; and I hope the time may never come, when the working people of our country, or indeed of the world, will become blindly discontented, or will become sullenly contented. I believe that the welfare of the wage-earning class, I believe that the perpetuity

of free government, I believe that the progress of the human race, depend upon the intelligent discontent of all the people. I do not mean the discontent that makes men and women do things that are wrong, nor want things they should not have; I mean that discontent that makes men and women strive and seek for more of the good things of this world—makes men and women seek for higher life, for more happiness, for better homes, for better manhood and womanhood, and for better civilization.

That is the discontent inculcated by education; and I am firm in my own opinion, that the problem of labor will not be solved, until all the people of our country shall enjoy the advantages of reasonable education.

There is one phase of this labor problem that is causing the wage earners much concern. In our country we have free schools that the children may attend. We have night schools where the grown boys may secure education; but each year there come to our shores hundreds of thousands of men from other climes, who know not our language, who in most cases are totally illiterate, and we must at some time or other, make suitable appropriation and provision for educating them. I believe, although this is somewhat foreign to the subject of this gathering, I believe that our government should require certain educational qualifications as a condition of admission to our country. (Applause.)

In fixing these standards I would not bar any man because of the country from which he came, nor would I require that he be educated in the language we speak; but I would require that every man landing on our shores, should be able to read and write the language of the country from which he came. If he were reasonably educated in the language and in the country from which he came, it would not be long before he would learn our language and measure up to our standards. (Applause.)

Gentlemen, it is difficult to consider the International Correspondence Schools as a purely commercial enterprise. To me it has seemed rather to be a great philanthropic institution. Men from one end of our country to the other are enjoying the advantages of education. The opportunities offered to them now differ so much from the opportunities afforded us when we were boys. I have often thought that if I could have had the opportunity of a Course in the Correspondence Schools when I was a boy, it would have saved me many and many a sleepless night.

I hope that these Schools will continue their splendid work, that their students will increase in numbers, so that every one who desires to, may be given the advantage of education. (Applause.)



HON. H. M. EDWARDS

## THE I. C. S. AT HOME

# HON. H. M. EDWARDS President Judge of Lackamanna County Courts, Scranton, Pa.

MR. TOASTMASTER AND GENTLEMEN:

I want to greet you at this early hour in the morning, with my very best wishes, because this great Institution, the International Correspondence Schools, is a Scranton institution. It is my distinguished privilege to say a few words—and they will be but very few, on account of the lateness of the hour—as to this great Institution.

I have been looking up some of the facts connected with the I. C. S., and I have been bewildered by statistics. I don't know how much money these Schools pay to the post office every month or every year. Is it a hundred thousand dollars, or is it a million dollars in a year? How many students have they? Is it a hundred thousand, or is it a million? Whatever Mr. Foster says it is, whether he says it here on this platform, or whether he says it in circulars and in books, I am ready to believe anything that can be said about the International Correspondence Schools of Scranton. I have great faith in them. And no statement can be made by the founder of this Institution and by his coworkers, that I will not believe. You can call it faith, you can call it credulity, you can call it loving favoritism—call it whatever you like—but whatever you call it, I am guilty; and there is no statement that can be made that I will not say "Amen" to.

I am like the preacher whose boys found out what chapter he was going to read the next morning, and they glued two leaves together. And the preacher the next morning—Sunday morning—began reading thus: "When Noah was one hundred and twenty years old, he took unto himself a wife, who was" and then he turned the leaves that had been glued together: "one hundred and forty cubits long, forty cubits wide, built of gopher wood, and covered with pitch, inside and out." (Laughter.) The preacher looked and tried to verify it; looked again, and then said, "Why, I never knew that was in the Bible, but it's here, and I take it as an evidence of the assertion that we are fearfully and wonderfully made." (Laughter.)

And so it is with me, gentlemen: I have got as much faith and as much credulity and as much enthusiasm in this Institution as that preacher had in the Good Book. I have very little use for the man who has not brought to his home city, to his own town, to his own state, to his own country, to his own fellow men, of the good things that touch the edges, the rims of life.

Why, I know a man that was proud even of being a member of the House of Representatives at Harrisburg. It was his first term. (Laughter.) The House was everything; the Senate was of no account. His wife woke him up one night, and said, "John, John, there are burglars in the house." "Oh, no, no, Mary; there may be burglars in the Senate, but there are none in the House."

And so we are proud of this home Institution of ours. proud of its founder. We are proud of his coworkers; and we are proud of his army in the field, many of whom we see before Why, the story of the growth of the I. C. S. is us here tonight. like a tale from the Arabian Nights. And if I had time tonight as I had intended, providing that the speaking had not been so long, or we were not detained so late—I would have said something in that direction. There is, however, one sentiment that I want to impress strongly tonight upon the gentlemen on this platform, gentlemen of learning and position from other cities and from When they go back to their homes they will rememother states. ber many things about the city of Scranton, about its streets and buildings, about its mines and industries, about its water system and its electric system, about its churches and its public schools.

# Opened the Door of Opportunity

They will remember probably some of these things; but if they forget all else, I want them to remember one thing, and that is, that the I. C. S. has opened the door of opportunity for the sons and daughters of miners and mechanics and other wage earners, to make of themselves respected, self-respecting men and women; and it is for that reason mainly that we glory in the International Correspondence Schools of Scranton. (Applause.)

These young people are growing up with this Institution, are becoming a part of it, and are enjoying the delectable line of knowledge and intellectual pleasure. Therefore all honor to the founder of this Institution and to his coworkers. "May he live long, and prosper," as Joe Jefferson used to say. One thing at least is certain—that he and his coworkers are building a monument that will endure long after the walls of the present I. C. S. buildings will have crumbled into dust. (Applause.)



COLONEL CHARLES W. LARNED, U. S. A.

# CONSTRUCTIVE EDUCATION

COL. CHARLES W. LARNED, U. S. A.

Professor of Technical and Military Graphics and Applied Geometry,
United States Military Academy, West Point, N. Y.

#### MR. PRESIDENT AND GENTLEMEN:

As your eloquent editor who addressed you this morning remarked, I have been asked to "butt in" among my betters. It seems to me something of an impertinence that I should address you after you have listened to so many distinguished speakers.

I have learned so much this evening from the genial "Goliath of the Philistine" who has preceded me, that I am very glad, as a military man, to be a "Philistine" myself; and I sincerely trust there is no academic David present here to hit me in the eye with a pebble of exact thought.

I have also learned so much wisdom from the noble advocate of wage earners who has preceded me, that I am very glad I am a wage earner myself, although in soldier clothes. And I am very grateful to you this evening, that you have not ordered me out, although I took the precaution to appear in civilian garments before you. It is usual for the American public to request gentlemen in soldier clothes to disappear on public occasions.

# Constructing Opportunity for the Masses

As a mere military pedagogue from the school of war at West Point and the Hills of the Hudson, I feel somewhat out of place in addressing a community whose interests are so much allied to the arts of peace as are yours. A military school is always on the defensive in a civil community. A military school is occupied with the arts of destruction instead of construction. The school at whose feet I am sitting this evening, is preeminently concerned in the arts of construction. You are concerned in the arts of construction, because you are constructing the intelligence upon the brawn and sinews of our land, because you are constructing opportunity for the wage earners of this country.

The military academy at West Point is concerned, as I have said, with destruction—but not altogether. The two twin military schools of this country, Annapolis and West Point, are in one respect

constructive. They are constructive in regard to the formation of character. As great character institutions, I think that perhaps they have no superior in all the world. The character which these schools endeavor to construct is the character whose elements are first of all, patriotism; second, integrity; third, truthtelling; fourth, discipline; fifth, simplicity of life; next, perhaps, unselfishness; and last of all, the merits of poverty. It is the privilege of the American soldier and sailor to remain poor in the community where opportunity for wealth lies profusely about us on all sides.

Perhaps the construction in which we are engaged, will be an apology for our existence, which the country sometime may be willing to accept at its face value. I think these elements of construction are of value to any community, civil or military, and that perhaps in an age in which the arts of gain are predominant, these elements of simplicity of character and integrity of life—which are all a soldier has to hope for—may prove of as much value to our great community as the arts of gain.

My Commanding Officer, the Superintendent of the Military Academy, who is present with us tonight, and who ought to occupy my place in addressing you, has faced the Apaches in Arizona; he has faced the Spaniards at Santiago; he has faced the Moros in the Philippines; but it has been reserved for him to be appalled by a community of pedagogues and students in Scranton.

As I well knew the diffidence and timidity of his character before I came, I knew that I should be left to face alone the ferocious hospitality of the International Correspondence Schools, so that in mere self-defence, before I came, I armed myself with a few "impromptu" remarks, which I put in my pocket, as on previous occasions I have found necessary in order to defend my life under similar conditions. There is only a little of these remarks, so I will assuage your anxiety, and if you will permit me to draw my gun, I will read to you. (Applause.) They are, as you will observe, wholly "impromptu." (Laughter.)

# Progressive Vitality of the I. C. S.

Both as an educator and as a man I am profoundly interested in the work of this great School. As an educator I see in its processes very much that is admirable as well as unique, and in the accumulated experience of its dealings with a vast variety of intelligences seeking knowledge under adverse conditions of development and opportunity, it has many lessons to teach institutional education. The most inspiring feature of its methods seems to me to reside in its vigorous and progressive vitality. They are not only theoretically practical, but are intimately and directly associated throughout the whole range of industrial activity with living interests which react upon them and keep them sympathetically adjusted to human needs and accomplishment.

In this the Correspondence Schools possess an immense advantage over academic institutions, and on account of it their methods have a flexibility, a power of securing a high degree of intelligent achievement by a large percentage of their students, and a quality of up-to-dateness that in technical instruction is of the highest importance. I understand that this Institution is frankly one for imparting knowledge and not at all to the same degree a school for the training of intellect and the development of mental powers, which function the wholly elective nature of your system renders subordinate. Its effects in mental training are incidental only and not primary. Your clientele wants knowledge for use and not for gymnastics, and your function in providing it is in the highest degree important and beneficial, and the mental training incident thereto gives also much exercise to the intellectual powers of thousands who cannot enter the educational gymnasia for pure mind-development.

## Splendid Material in Student Body

In another regard your system has a great advantage. I refer to the attitude of the student body toward their work. You deal with those who seek because they desire, and you thus eliminate the element of reluctance, apathy, and evasion which constitute the curse of education. Something of this may be offset by the loss of the stimulus of competition and association; but after all, these latter are only makeshifts to secure as much as possible of the very quality of interest which you possess as a natural attribute of your students; and the desire to know for the sake of knowledge is always an immensely higher motive than the desire to surpass others. As a feature of your methods, I also highly indorse the process of development of your textbooks.

In all the applied science, textual instruction is ever in a state of flux and transition. The temptation to write dogmatic text-books and gospels of science is one to which the professional mind is prone to succumb. No sooner is the pedagogic brain delivered of its child than its offspring begins to degenerate. Both the author and the publisher are interested in preserving and defending the integrity of the text; the one from pride, and the other from profit, so that obsolete processes and deductions are often retained

in instruction to the detriment of the student long after they should have given place to advanced thought.

One is almost tempted to accept the paradox that textual instruction should be without textbooks. But your method of pamphlet issue by which your textbooks are built up of relatively small integral parts, any one of which may be wholly withdrawn, or recast, from time to time, and kept abreast with the latest discovery, makes your books living and growing organisms.

## Great Industrial College

But after all it is as a man that I am most interested in your work—your function as a great industrial and trade college. It is your relation to the vast body of hand and industrial workers that appeals to me. It is the fact that your students are nearly all of the great army of wealth creators, the wage earners—the producers of a luxury enjoyed by others, and the promoters of an immense industrial development whose fruit is not theirs. The crying need of trade schools is one of the greatest of our requirements in view of the decay and virtual extinction of the apprentice system. Correlatively exists the demand for an industrial and technical college system which is in reach of the proletariat and the active wage earner everywhere. This latter function I conceive you fill with admirable results.

It lends a splendid dignity to any institution of learning that it is feeding the minds of the earners of the land, and that its undergraduates and alumni are of a type that dedicate their hours of hard-earned rest and pleasure to the acquisition of knowledge. The contrast between the grim earnestness of such a student body and the frivolous idling of collegiate youth is a contemplation pregnant with serious thought. You are educating many of those who are to control the social destinies of the twentieth century. The issues behind which are standing the immense masses, so many of whom are seeking your aid, are not to be ignored, belittled, or evaded. As sure as the rising of the sun, as logical as a mathematical demonstration, is the progress of social regeneration which is the issue of the century before us; and on the intelligence, the forbearance, the self-restraint of the industrial classes depend the nature and degree of progress of the changes in society which our children and our children's children are to witness.

To be essentially the academy of such men is to hold a position of preeminent importance in society, while to perform the duties of such a trust with fidelity and a high degree of successful achievement is an honor second to none in the educational world.



RT. REV. ETHELBERT TALBOT, D.D., LL.D.

# EDUCATION AND MORAL REFORM

RT. REV. ETHELBERT TALBOT, D.D., LL.D.

Bishop of Central Pennsylvania, South Bethlehem, Pa.

#### MR. TOASTMASTER AND GENTLEMEN:

The hour is very late, but it seems to me eminently fitting that as we have just heard very strong and manly and, I may say, Christian words from a man whose business it is to teach men how to fight, that we should hear at least one word from those whose business it is to teach men the gentle way of peace.

The peculiar glory, it seems to me, of the Institution we are commemorating tonight, and whose marvelous success is the glory of the country—its peculiar glory is that it dignifies the art of the individual.

## The Honor of Labor

If you will study history intelligently, you will find that the dignity of the individual man has been growing steadily for just about nineteen hundred and six years, and that it had its start in the advent on this earth of a man who was the most unique and indefatigable worker, the most honest laborer, the world has ever Before the advent of the Great Lover of Mankind, work was reserved for slaves and criminals. He came into the world as a He said "My father has been working all along, and I laborer. work." He made labor honorable. He filled it full of moral He gave it virtues of an infinite character. And it seems to me, gentlemen, we ought to honor the founder of this Institution, if for no other reason, because he has opened the doors of both privilege and opportunity to thousands and thousands of men in our country who without his efforts would never know of these things. It seems to me it is his peculiar distinction and his peculiar honor, with which we can all sympathize. The fact is, labor has become the one great characteristic and honor of this century in which you and I are living. It has become, indeed, the mark of this great American Republic.

The world has never seen such great industrial enterprises, or such magnificent schools, as we find here on this American continent.

And you also observe, we are living in an age of most distinct and critical and acute moral reformation. Have you ever thought that underneath all these attempts at municipal purity and political purity and the purification of the trusts and these great industrial reforms—have you noticed that underneath all is the great ethical principle? Did you notice what our friend from West Point said, that the Government is trying to give to the average military man—he laid great emphasis on the basic principles—moral and religious principles, without which in his conception, no real soldier is fit? And it seems to me we have every reason, therefore, to congratulate ourselves, not only because of the great industrial progress of this age—I see nothing whatever to be afraid of in it—but also because of the enormous strife of the scientific problems of this age.

### Glorifies the Laborer's Life

Some one has intimated tonight, and it is the absolute truth, that science bases everything upon truth. He might have said eternal truth. Science welcomes all truth, and if there is anything in this world of ours that ought to welcome truth on every side, from every possible avenue where it can pour out, it is religion. Religion that is afraid of truth and science and investigation—religion that does not recognize that all truth comes from God, the incarnation of truth, is not a religion to command the respect of American citizens. There are no high arches in this great design. There is such an Institution as this here, to which you and I are engaged tonight in doing honor. It seems to me the true fact that it does give the individual man, poor and handicapped as he may be by the conditions of life, the power not only to labor, but to make his labor count to the highest possible profit.

And gentlemen, lawyers work for a living, when you come to this matter of labor; the man who works, who labors with his brains, may become just as indefatigable a worker and as real a benefactor to his race, and as high and noble a product of our American citizenship, as the man who works with his hands. All labor is divine:

Therefore it is, I think, that we can all agree in paying tribute to our venerable friend who has called us here together tonight in order that we may witness and realize the great work that has been done, not by him alone, but by him in connection with his associates, in spreading the knowledge of science and of independence and the produce of the brain, not only through this Republic, but among the nations of the earth.

#### Monumental Work of the I. C. S.

Over the north entrance to the great cathedral of St. Paul's, in London, is a tablet commemorating the work of Sir Christopher Wren, the great architect. The tablet bears the inscription, "Si monumentum requiris, circumspice"—"If thou seekest his monument, look around thee." So, if you would see the monument of our venerable friend, just look around you. Not all men live to see the outcome of their prayers and their aspirations. I congratulate my friend that he is not only here, but is hale and hearty, with his faculties unabated, with his vision still clear and radiant; that he is here to enjoy the success of the Schools, which he so largely deserves.

I happen to have the pleasure and honor of sitting by the side of his pastor here tonight. He has told me how earnestly he finds him cooperating with him in the religious efforts that are being made here, for the benefit of the city of Scranton; and I am sure that no such great blessing could have attended his work if it had not been along generous and loving purposes—of not only doing his work well, but for the highest benefit of his fellow man.

This is my message—simply a word of loving and fraternal congratulation—that in God's providence he has been spared to see such enormous fruitage to the work he has so faithfully done. (Applause.)



# "GOOD NIGHT"

#### THOMAS J. FOSTER

President of the International Textbook Company, Scranton, Pa.

#### MR. TOASTMASTER AND GENTLEMEN:

It is now about half past one o'clock—high time we were all in bed. The only "nightcap" I can find my conscience will permit me to give you, will be to thank you sincerely for all you have said to us today.

I cannot let you leave, however, without making a few remarks that I feel to be necessary in closing these exercises. It will take only a minute or two.

In answering your generous call and in returning thanks for the many kind expressions of appreciation and approval of the work being done through our Schools, I wish to say to you, our guests, many of whom are engaged in kindred work, that we feel highly honored by your presence.

# Work Becoming Appreciated

When these Anniversary Exercises were first proposed, it was not intended to invite any one to take part in them except our officers, employes, and students. But the suggestion was made that this would be an opportunity to explain our methods to educators, to the members of the press, and to the public, who might be interested. It was decided, therefore, to invite as many representatives of these classes as could be entertained. The suggestion was a happy one, since from the letters of many gentlemen who cannot attend, and from the remarks of many of those present, I find that our work is much better understood and far more highly appreciated than I thought. The knowledge that our work is coming to be known and appreciated will encourage us to further effort and must result in good both to the Institution and to the people among whom we work.

In giving your time to these exercises with the view of finding out what this new plan of teaching means, you have shown an interest worthy of praise, in the cause of education, and we hope that you will have seen something which you can take home and use to help others. We wish also to express the hope that this may not be the last occasion when we shall meet. We want you to feel that the latch string of the I. C. S. is always hanging out either for you or for any of your friends whom you may send to examine our work.

### Credit Given to Coworkers

I should fail in my duty if I did not take advantage of this, the first opportunity that offers, to say that in giving credit for efficiency and for results to the I. C. S. system of teaching, a large, if not the larger share belongs to my coworkers. The members of the Board of Directors are directors not only in name but in fact. An Executive Committee composed of four members of the Board, devotes four days each month to the business. They and their friends are the largest owners of the stock of the Company. Because of their faith in the enterprise, it has never been short of capital, and I have had the benefit of their counsel and support in every step in the development of the Institution. Nor has their purpose in investing their money and giving their time been for gain alone, for they as well as others engaged in the work share in the stimulation due to witnessing the good being done.

To the officers and members of the textbook, illustrating, and printing departments, of whose intelligent and faithful labor the textbooks, which are the basis of the I. C. S. system, are convincing evidence, credit is due; also to the principals and instructors whose patient, painstaking, and efficient work with the students, has made the reputation of the Schools.

To the officers of the accounting and executive departments, and to their assistants, I am indebted for loyal, enthusiastic and skilful service.

Great credit is due also to the thousands of students who are helping to secure new students by their testimony to the efficiency and merit of the educational service rendered. Some of these students, representing all sections of the United States and Canada, are present with us tonight.

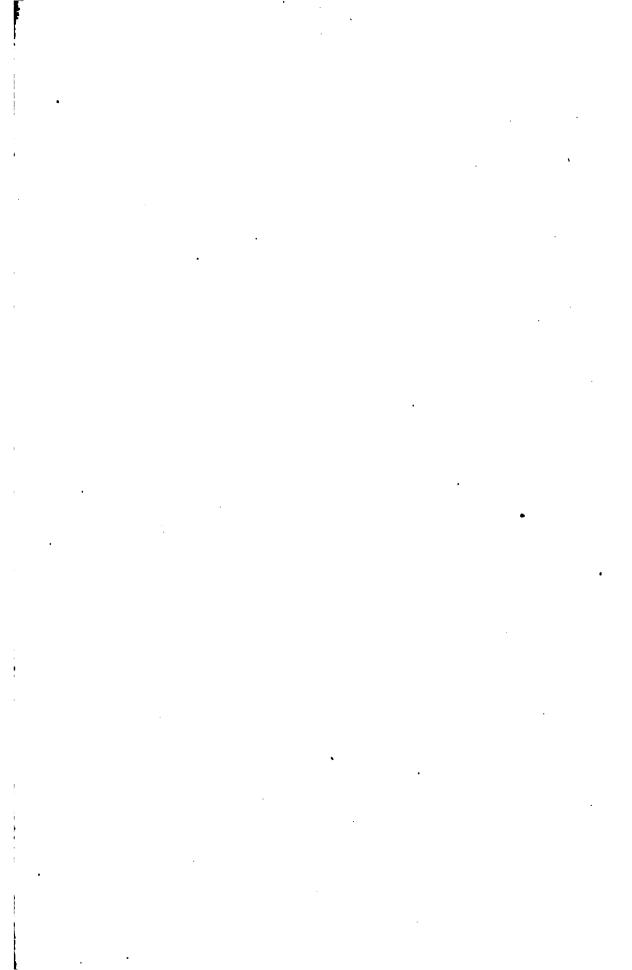
## Creators of Character

To the officers and members of the selling organizations, field, railway and mail, a large share of the credit must be awarded. No salesmen work more hours daily than I.C.S. Representatives. Because they sell to working people who are engaged in the day-time, most of their work must be done at night. Their work is

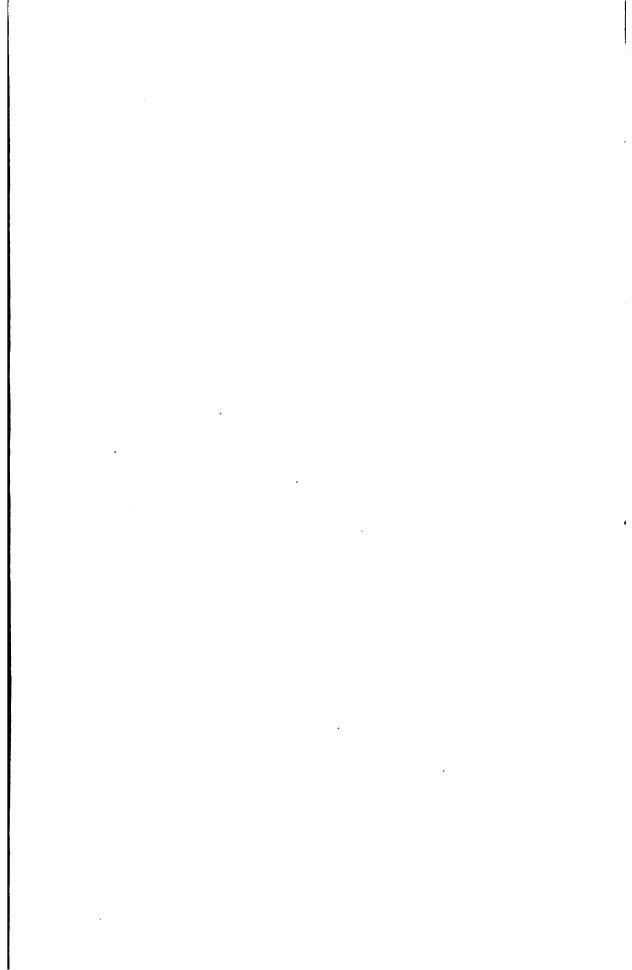
such that they must be absorbed in it to be successful. However, the men who make these sacrifices are successful; they find the business very attractive, and few of them give it up. They feel the stimulation, which is the reward of work, helpful to others, more strongly, perhaps, than those of us whose duties are confined to the home departments. In making brain workers of those whose training is limited to their hands, they are encouraged by seeing about them everywhere men who have gained a footing above the level of mediocrity, in which the great mass of working people are engulfed. These creators of character, whose daily business it is to induce men to forego idle pleasure and cultivate habits of self-denial and study, secure the thousands of students that go to make the work of the Schools great when compared with ordinary educational standards. They not only merit a large share of the credit of making the institution what it is, but they are also held in grateful remembrance by the thousands and thousands of men whom they have helped to advancement and promotion, and to better lives.

In conclusion, I wish to say that, as in all other efforts for the improvement of the means of living, and the elevation of mankind, this work has just commenced. I am confident that within the next ten years we shall so improve our home-study textbooks and our system of assisting students by correspondence, and shall so increase the efficiency of the methods to secure their use by the public that the results now being accomplished will appear inconsiderable in comparison with those that we shall then be obtaining.









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